













HCM 6th Signalized Intersection Summary
 1: I-5 Ramps SB Ramps & 8 Mile Road

Existing AM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	392	853	764	852	0	0	0	0	67	0	97
Future Volume (veh/h)	0	392	853	764	852	0	0	0	0	67	0	97
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	426	927	830	926	0				73	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1401	1187	1397	2978	0				171	0	
Arrive On Green	0.00	0.37	0.37	0.81	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	426	927	830	926	0				73	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	6.9	22.2	7.6	0.0	0.0				1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.9	22.2	7.6	0.0	0.0				1.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1401	1187	1397	2978	0				171	0	
V/C Ratio(X)	0.00	0.30	0.78	0.59	0.31	0.00				0.43	0.00	
Avail Cap(c_a), veh/h	0	1401	1187	1397	2978	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.73	0.73	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.0	23.8	5.6	0.0	0.0				39.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	5.1	0.5	0.2	0.0				1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	8.7	1.7	0.1	0.0				0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.6	28.9	6.1	0.2	0.0				41.5	0.0	0.0
LnGrp LOS	A	B	C	A	A	A				D	A	
Approach Vol, veh/h		1353			1756						73	A
Approach Delay, s/veh		26.0			3.0						41.5	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			39.9	37.3		8.8		77.2				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			21.3	* 32		18.0		58.2				
Max Q Clear Time (g_c+I1), s			9.6	24.2		3.7		2.0				
Green Ext Time (p_c), s			2.7	4.3		0.1		8.5				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps NB Ramps & 8 Mile Road

Existing AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	350	0	0	1092	131	532	2	363	0	0	0
Future Volume (veh/h)	117	350	0	0	1092	131	532	2	363	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	127	380	0	0	1187	142	579	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	557	2433	0	0	1837	218	717	0				
Arrive On Green	0.10	0.23	0.00	0.00	0.31	0.31	0.20	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6133	699	3563	0	1585			
Grp Volume(v), veh/h	127	380	0	0	974	355	579	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1745	1781	0	1585			
Q Serve(g_s), s	5.6	7.4	0.0	0.0	15.0	15.1	13.3	0.0	0.0			
Cycle Q Clear(g_c), s	5.6	7.4	0.0	0.0	15.0	15.1	13.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.40	1.00		1.00			
Lane Grp Cap(c), veh/h	557	2433	0	0	1509	546	717	0				
V/C Ratio(X)	0.23	0.16	0.00	0.00	0.65	0.65	0.81	0.00				
Avail Cap(c_a), veh/h	557	2433	0	0	1509	546	1297	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.93	0.93	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.0	13.3	0.0	0.0	25.4	25.5	32.8	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.1	5.9	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.5	3.0	0.0	0.0	5.8	6.9	5.8	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.5	0.0	0.0	27.6	31.4	35.0	0.0	0.0			
LnGrp LOS	C	B	A	A	C	C	C	A				
Approach Vol, veh/h		507			1329			579	A			
Approach Delay, s/veh		17.4			28.6			35.0				
Approach LOS		B			C			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.0		64.0			32.0	32.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 31		44.9			13.3	* 27				
Max Q Clear Time (g_c+I1), s		15.3		9.4			7.6	17.1				
Green Ext Time (p_c), s		2.0		2.7			0.1	5.9				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh65.7

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	315	249	136	327	13	155	23	167	12	25	8
Future Vol, veh/h	6	315	249	136	327	13	155	23	167	12	25	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	342	271	148	355	14	168	25	182	13	27	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	98.2	58.9	28.3	13.5
HCM LOS	F	F	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	1%	29%	27%
Vol Thru, %	7%	55%	69%	56%
Vol Right, %	48%	44%	3%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	345	570	476	45
LT Vol	155	6	136	12
Through Vol	23	315	327	25
RT Vol	167	249	13	8
Lane Flow Rate	375	620	517	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.736	1.115	0.969	0.119
Departure Headway (Hd)	7.397	6.48	7.031	9.261
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	491	558	517	389
Service Time	5.397	4.533	5.031	7.261
HCM Lane V/C Ratio	0.764	1.111	1	0.126
HCM Control Delay	28.3	98.2	58.9	13.5
HCM Lane LOS	D	F	F	B
HCM 95th-tile Q	6.1	19.6	12.7	0.4

Intersection

Intersection Delay, s/veh25.1
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	119	369	74	262	8	177	38	28	4	34	57
Future Vol, veh/h	26	119	369	74	262	8	177	38	28	4	34	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	129	401	80	285	9	192	41	30	4	37	62
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	34.4	20.6	17.1	12
HCM LOS	D	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	73%	5%	22%	4%
Vol Thru, %	16%	23%	76%	36%
Vol Right, %	12%	72%	2%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	514	344	95
LT Vol	177	26	74	4
Through Vol	38	119	262	34
RT Vol	28	369	8	57
Lane Flow Rate	264	559	374	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.51	0.867	0.655	0.204
Departure Headway (Hd)	6.949	5.588	6.303	7.107
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	518	648	572	501
Service Time	5.021	3.648	4.371	5.204
HCM Lane V/C Ratio	0.51	0.863	0.654	0.206
HCM Control Delay	17.1	34.4	20.6	12
HCM Lane LOS	C	D	C	B
HCM 95th-tile Q	2.9	10	4.8	0.8

Intersection						
Int Delay, s/veh	6.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	15	252	129	6	303	109
Future Vol, veh/h	15	252	129	6	303	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	274	140	7	329	118

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	920	144	0	0	147
Stage 1	144	-	-	-	-
Stage 2	776	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	301	903	-	-	1435
Stage 1	883	-	-	-	-
Stage 2	454	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	227	903	-	-	1435
Mov Cap-2 Maneuver	227	-	-	-	-
Stage 1	883	-	-	-	-
Stage 2	343	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	6.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1435
HCM Lane V/C Ratio	-	-	0.303	0.23
HCM Control Delay (s)	-	-	10.4	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.9

Intersection						
Int Delay, s/veh	6.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷		↶	↷	
Traffic Vol, veh/h	140	37	133	196	235	236
Future Vol, veh/h	140	37	133	196	235	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	152	40	145	213	255	257

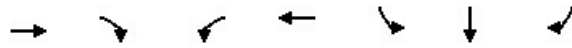
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	758	-	255	0	-
Stage 1	255	-	-	-	-
Stage 2	503	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-
Pot Cap-1 Maneuver	375	0	1310	-	-
Stage 1	788	0	-	-	0
Stage 2	607	0	-	-	0
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	328	-	1310	-	-
Mov Cap-2 Maneuver	328	-	-	-	-
Stage 1	689	-	-	-	-
Stage 2	607	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.1	3.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1310	-	328	-	-
HCM Lane V/C Ratio	0.11	-	0.464	-	-
HCM Control Delay (s)	8.1	0	25.1	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.4	-	2.3	-	-

Queues
1: I-5 Ramps SB Ramps & 8 Mile Road

Existing AM
08/18/2020









Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	890	463	830	926	36	37	105
v/c Ratio	0.38	0.52	0.98	0.32	0.14	0.18	0.07
Control Delay	10.1	4.3	43.4	0.6	29.9	29.8	0.1
Queue Delay	0.0	0.0	28.0	0.1	0.0	0.0	0.0
Total Delay	10.1	4.3	71.4	0.7	29.9	29.8	0.1
Queue Length 50th (ft)	77	0	240	4	16	16	0
Queue Length 95th (ft)	115	73	#359	4	43	44	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2316	894	850	2852	351	211	1583
Starvation Cap Reductn	0	0	75	706	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.52	1.07	0.43	0.10	0.18	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.













Queues
2: I-5 Ramps NB Ramps & 8 Mile Road

Existing AM
08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	127	380	1329	289	291	395
v/c Ratio	0.47	0.21	0.67	0.47	0.47	0.25
Control Delay	42.1	13.3	26.9	24.2	24.2	0.4
Queue Delay	0.4	1.8	1.2	0.0	0.0	0.0
Total Delay	42.5	15.1	28.1	24.2	24.2	0.4
Queue Length 50th (ft)	62	75	175	124	125	0
Queue Length 95th (ft)	114	117	213	201	203	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	273	1847	1996	611	613	1583
Starvation Cap Reductn	20	1278	0	0	0	0
Spillback Cap Reductn	0	0	416	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.67	0.84	0.47	0.47	0.25
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 SB Ramps & 8 Mile Road

Existing PM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	576	774	380	1268	0	0	0	0	167	3	192
Future Volume (veh/h)	0	576	774	380	1268	0	0	0	0	167	3	192
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	626	841	413	1378	0				184	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1036	2810	0				287	0	
Arrive On Green	0.00	0.42	0.42	0.10	0.26	0.00				0.08	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	626	841	413	1378	0				184	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	8.8	15.8	8.5	25.0	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.8	15.8	8.5	25.0	0.0				3.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1036	2810	0				287	0	
V/C Ratio(X)	0.00	0.39	0.63	0.40	0.49	0.00				0.64	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1036	2810	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	17.2	27.8	15.1	0.0				33.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	2.2	0.2	0.5	0.0				2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	5.1	3.4	11.5	0.0				1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.9	19.4	28.0	15.6	0.0				36.3	0.0	0.0
LnGrp LOS	A	B	B	C	B	A				D	A	
Approach Vol, veh/h		1467			1791						184	A
Approach Delay, s/veh		17.9			18.4						36.3	
Approach LOS		B			B						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			27.9	37.3		10.8		65.2				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			11.3	* 32		18.0		48.2				
Max Q Clear Time (g_c+I1), s			10.5	17.8		5.8		27.0				
Green Ext Time (p_c), s			0.1	6.3		0.4		9.4				
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 NB Ramps & 8 Mile Road

Existing PM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	629	0	0	763	68	904	0	755	0	0	0
Future Volume (veh/h)	136	629	0	0	763	68	904	0	755	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	148	684	0	0	829	74	983	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	182	1948	0	0	2329	205	1151	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.38	0.38	0.32	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6326	535	3563	0	1585			
Grp Volume(v), veh/h	148	684	0	0	658	245	983	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1774	1781	0	1585			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	7.4	7.5	19.6	0.0	0.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	7.4	7.5	19.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.30	1.00		1.00			
Lane Grp Cap(c), veh/h	182	1948	0	0	1853	681	1151	0				
V/C Ratio(X)	0.81	0.35	0.00	0.00	0.35	0.36	0.85	0.00				
Avail Cap(c_a), veh/h	265	1948	0	0	1853	681	1467	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	16.7	16.7	24.1	0.0	0.0			
Incr Delay (d2), s/veh	10.6	0.4	0.0	0.0	0.5	1.5	4.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.0	0.0	2.4	2.8	8.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.4	0.0	0.0	17.2	18.2	28.2	0.0	0.0			
LnGrp LOS	D	A	A	A	B	B	C	A				
Approach Vol, veh/h		832			903			983	A			
Approach Delay, s/veh		7.5			17.5			28.2				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.2		46.8			12.5	34.3				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 31		34.9			* 11	18.9				
Max Q Clear Time (g_c+I1), s		21.6		2.0			8.0	9.5				
Green Ext Time (p_c), s		2.9		4.3			0.1	3.5				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh95.3
 Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	342	218	106	418	19	193	18	145	19	47	10
Future Vol, veh/h	3	342	218	106	418	19	193	18	145	19	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	372	237	115	454	21	210	20	158	21	51	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	119.5	120.4	35.7	15.7
HCM LOS	F	F	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	1%	20%	25%
Vol Thru, %	5%	61%	77%	62%
Vol Right, %	41%	39%	3%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	356	563	543	76
LT Vol	193	3	106	19
Through Vol	18	342	418	47
RT Vol	145	218	19	10
Lane Flow Rate	387	612	590	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.794	1.166	1.165	0.208
Departure Headway (Hd)	8.08	7.21	7.469	10.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	453	508	490	360
Service Time	6.08	5.21	5.469	8.036
HCM Lane V/C Ratio	0.854	1.205	1.204	0.231
HCM Control Delay	35.7	119.5	120.4	15.7
HCM Lane LOS	E	F	F	C
HCM 95th-tile Q	7.1	20.8	20.3	0.8

Intersection

Intersection Delay, s/veh65.7

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	234	269	53	216	8	325	55	86	10	34	54
Future Vol, veh/h	25	234	269	53	216	8	325	55	86	10	34	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	254	292	58	235	9	353	60	93	11	37	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	93.6	24.2	69.6	14.6
HCM LOS	F	C	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	70%	5%	19%	10%
Vol Thru, %	12%	44%	78%	35%
Vol Right, %	18%	51%	3%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	466	528	277	98
LT Vol	325	25	53	10
Through Vol	55	234	216	34
RT Vol	86	269	8	54
Lane Flow Rate	507	574	301	107
Geometry Grp	1	1	1	1
Degree of Util (X)	1.005	1.095	0.64	0.246
Departure Headway (Hd)	7.438	6.866	8.008	8.8
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	491	528	455	411
Service Time	5.438	4.945	6.008	6.8
HCM Lane V/C Ratio	1.033	1.087	0.662	0.26
HCM Control Delay	69.6	93.6	24.2	14.6
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	13.7	18	4.4	1

HCM 6th TWSC
 14: West SR 99 Frontage Rd (8 Mile) & SB SR 99 Ramps

Existing PM
 08/18/2020

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	23	270	101	7	179	149
Future Vol, veh/h	23	270	101	7	179	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	293	110	8	195	162

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	666	114	0	0	118
Stage 1	114	-	-	-	-
Stage 2	552	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	425	939	-	-	1470
Stage 1	911	-	-	-	-
Stage 2	577	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	363	939	-	-	1470
Mov Cap-2 Maneuver	363	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	493	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1470
HCM Lane V/C Ratio	-	-	0.313	0.132
HCM Control Delay (s)	-	-	10.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.5

Intersection						
Int Delay, s/veh	9.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵	↵		↵	↵	
Traffic Vol, veh/h	239	55	93	160	193	149
Future Vol, veh/h	239	55	93	160	193	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	260	60	101	174	210	162

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	586	- 210	0	-	0
Stage 1	210	- -	-	-	-
Stage 2	376	- -	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	- -	-	-	-
Critical Hdwy Stg 2	5.42	- -	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	473	0 1361	-	-	0
Stage 1	825	0 -	-	-	0
Stage 2	694	0 -	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	434	- 1361	-	-	-
Mov Cap-2 Maneuver	434	- -	-	-	-
Stage 1	757	- -	-	-	-
Stage 2	694	- -	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.9	2.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1361	-	434	-	-
HCM Lane V/C Ratio	0.074	-	0.599	-	-
HCM Control Delay (s)	7.9	0	24.9	0	-
HCM Lane LOS	A	A	C	A	-
HCM 95th %tile Q(veh)	0.2	-	3.8	-	-

Queues
1: I-5 SB Ramps & 8 Mile Road

Existing PM
08/18/2020







	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1047	420	413	1378	93	92	209
v/c Ratio	0.45	0.48	0.81	0.55	0.27	0.29	0.13
Control Delay	11.1	3.7	36.0	4.5	26.1	26.2	0.2
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	11.1	3.7	36.0	4.8	26.1	26.2	0.2
Queue Length 50th (ft)	96	0	85	36	37	36	0
Queue Length 95th (ft)	134	58	#165	98	77	76	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2326	875	510	2503	398	319	1583
Starvation Cap Reductn	0	0	0	498	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.48	0.81	0.69	0.23	0.29	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.













Queues
2: I-5 NB Ramps & 8 Mile Road

Existing PM
08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	148	684	903	491	492	821
v/c Ratio	0.63	0.42	0.54	0.71	0.71	0.52
Control Delay	46.6	9.7	25.0	25.4	25.5	1.2
Queue Delay	0.0	0.7	0.0	0.2	0.2	0.0
Total Delay	46.6	10.3	25.0	25.6	25.7	1.2
Queue Length 50th (ft)	59	48	105	196	196	0
Queue Length 95th (ft)	125	71	136	313	314	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	263	1625	1687	692	692	1583
Starvation Cap Reductn	0	567	0	0	0	0
Spillback Cap Reductn	0	0	44	15	15	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.65	0.55	0.73	0.73	0.52
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 Ramps SB Ramps & 8 Mile Road

Existing plus Phase 1 AM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	393	853	764	852	0	0	0	0	67	0	97
Future Volume (veh/h)	0	393	853	764	852	0	0	0	0	67	0	97
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	427	927	830	926	0				73	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1401	1187	1397	2978	0				171	0	
Arrive On Green	0.00	0.37	0.37	0.81	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	427	927	830	926	0				73	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	6.9	22.2	7.6	0.0	0.0				1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.9	22.2	7.6	0.0	0.0				1.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1401	1187	1397	2978	0				171	0	
V/C Ratio(X)	0.00	0.30	0.78	0.59	0.31	0.00				0.43	0.00	
Avail Cap(c_a), veh/h	0	1401	1187	1397	2978	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.73	0.73	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.0	23.8	5.6	0.0	0.0				39.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	5.1	0.5	0.2	0.0				1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	8.0	1.6	0.1	0.0				0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.6	28.9	6.1	0.2	0.0				41.5	0.0	0.0
LnGrp LOS	A	B	C	A	A	A				D	A	
Approach Vol, veh/h		1354			1756						73	A
Approach Delay, s/veh		26.0			3.0						41.5	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			39.9	37.3		8.8		77.2				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			21.3	* 32		18.0		58.2				
Max Q Clear Time (g_c+I1), s			9.6	24.2		3.7		2.0				
Green Ext Time (p_c), s			2.5	4.0		0.1		6.7				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps NB Ramps & 8 Mile Road

Existing plus Phase 1 AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	351	0	0	1092	131	532	2	363	0	0	0
Future Volume (veh/h)	117	351	0	0	1092	131	532	2	363	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	127	382	0	0	1187	142	579	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	558	2435	0	0	1837	218	716	0				
Arrive On Green	0.10	0.23	0.00	0.00	0.31	0.31	0.20	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6133	699	3563	0	1585			
Grp Volume(v), veh/h	127	382	0	0	974	355	579	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1745	1781	0	1585			
Q Serve(g_s), s	5.6	7.4	0.0	0.0	15.0	15.1	13.3	0.0	0.0			
Cycle Q Clear(g_c), s	5.6	7.4	0.0	0.0	15.0	15.1	13.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.40	1.00		1.00			
Lane Grp Cap(c), veh/h	558	2435	0	0	1509	546	716	0				
V/C Ratio(X)	0.23	0.16	0.00	0.00	0.65	0.65	0.81	0.00				
Avail Cap(c_a), veh/h	558	2435	0	0	1509	546	1297	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.93	0.93	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.0	13.3	0.0	0.0	25.4	25.5	32.8	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.1	5.9	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.3	2.3	0.0	0.0	5.4	6.4	5.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.5	0.0	0.0	27.6	31.4	35.0	0.0	0.0			
LnGrp LOS	C	B	A	A	C	C	D	A				
Approach Vol, veh/h		509			1329			579	A			
Approach Delay, s/veh		17.4			28.6			35.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.0		64.0			32.0	32.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 31		44.9			13.3	* 27				
Max Q Clear Time (g_c+I1), s		15.3		9.4			7.6	17.1				
Green Ext Time (p_c), s		1.9		2.2			0.1	5.3				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh68.3

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	316	251	136	333	13	155	23	167	12	25	8
Future Vol, veh/h	6	316	251	136	333	13	155	23	167	12	25	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	343	273	148	362	14	168	25	182	13	27	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	101.8	62	28.6	13.6
HCM LOS	F	F	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	1%	28%	27%
Vol Thru, %	7%	55%	69%	56%
Vol Right, %	48%	44%	3%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	345	573	482	45
LT Vol	155	6	136	12
Through Vol	23	316	333	25
RT Vol	167	251	13	8
Lane Flow Rate	375	623	524	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.738	1.125	0.982	0.12
Departure Headway (Hd)	7.432	6.503	7.051	9.32
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	491	561	519	387
Service Time	5.432	4.557	5.051	7.32
HCM Lane V/C Ratio	0.764	1.111	1.01	0.127
HCM Control Delay	28.6	101.8	62	13.6
HCM Lane LOS	D	F	F	B
HCM 95th-tile Q	6.1	20.1	13.1	0.4

Intersection

Intersection Delay, s/veh 25.8
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	119	369	74	263	8	183	38	28	4	34	57
Future Vol, veh/h	26	119	369	74	263	8	183	38	28	4	34	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	129	401	80	286	9	199	41	30	4	37	62
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	35.5	21.1	17.6	12.2
HCM LOS	E	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	73%	5%	21%	4%
Vol Thru, %	15%	23%	76%	36%
Vol Right, %	11%	72%	2%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	514	345	95
LT Vol	183	26	74	4
Through Vol	38	119	263	34
RT Vol	28	369	8	57
Lane Flow Rate	271	559	375	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.524	0.874	0.661	0.208
Departure Headway (Hd)	6.972	5.629	6.345	7.259
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	514	642	566	498
Service Time	5.054	3.695	4.422	5.259
HCM Lane V/C Ratio	0.527	0.871	0.663	0.207
HCM Control Delay	17.6	35.5	21.1	12.2
HCM Lane LOS	C	E	C	B
HCM 95th-tile Q	3	10.3	4.9	0.8

Intersection						
Int Delay, s/veh	6.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	15	252	129	6	305	109
Future Vol, veh/h	15	252	129	6	305	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	274	140	7	332	118

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	926	144	0	0	147
Stage 1	144	-	-	-	-
Stage 2	782	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	298	903	-	-	1435
Stage 1	883	-	-	-	-
Stage 2	451	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	224	903	-	-	1435
Mov Cap-2 Maneuver	224	-	-	-	-
Stage 1	883	-	-	-	-
Stage 2	339	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	6.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1435
HCM Lane V/C Ratio	-	-	0.303	0.231
HCM Control Delay (s)	-	-	10.4	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.9

Intersection						
Int Delay, s/veh	6.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	145	37	133	196	235	236
Future Vol, veh/h	145	37	133	196	235	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	158	40	145	213	255	257

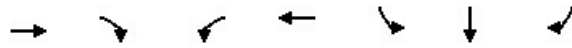
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	758	-	255	0	-
Stage 1	255	-	-	-	-
Stage 2	503	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-
Pot Cap-1 Maneuver	375	0	1310	-	-
Stage 1	788	0	-	-	-
Stage 2	607	0	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	328	-	1310	-	-
Mov Cap-2 Maneuver	328	-	-	-	-
Stage 1	689	-	-	-	-
Stage 2	607	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	3.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1310	-	328	-	-
HCM Lane V/C Ratio	0.11	-	0.481	-	-
HCM Control Delay (s)	8.1	0	25.7	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.4	-	2.5	-	-

Queues
1: I-5 Ramps SB Ramps & 8 Mile Road

Existing plus Phase 1 AM
08/18/2020









Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	891	463	830	926	36	37	105
v/c Ratio	0.38	0.52	0.98	0.32	0.14	0.18	0.07
Control Delay	10.1	4.3	45.1	0.7	29.9	29.8	0.1
Queue Delay	0.0	0.0	39.9	0.1	0.0	0.0	0.0
Total Delay	10.1	4.3	85.0	0.8	29.9	29.8	0.1
Queue Length 50th (ft)	77	0	244	3	16	16	0
Queue Length 95th (ft)	115	73	#363	2	43	44	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2316	894	850	2852	351	211	1583
Starvation Cap Reductn	0	0	128	711	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.52	1.15	0.43	0.10	0.18	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.













Queues
2: I-5 Ramps NB Ramps & 8 Mile Road

Existing plus Phase 1 AM
08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	127	382	1329	289	291	395
v/c Ratio	0.47	0.21	0.67	0.47	0.47	0.25
Control Delay	42.7	13.7	26.9	24.2	24.2	0.4
Queue Delay	0.4	1.7	2.2	0.0	0.0	0.0
Total Delay	43.1	15.4	29.1	24.2	24.2	0.4
Queue Length 50th (ft)	62	76	175	124	125	0
Queue Length 95th (ft)	112	117	213	201	203	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	273	1847	1996	611	613	1583
Starvation Cap Reductn	20	1264	0	0	0	0
Spillback Cap Reductn	0	0	502	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.66	0.89	0.47	0.47	0.25
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 SB Ramps & 8 Mile Road

Existing plus Phase 1 PM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	576	774	380	1269	0	0	0	0	167	3	192
Future Volume (veh/h)	0	576	774	380	1269	0	0	0	0	167	3	192
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	626	841	413	1379	0				184	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1036	2810	0				287	0	
Arrive On Green	0.00	0.42	0.42	0.10	0.26	0.00				0.08	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	626	841	413	1379	0				184	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	8.8	15.8	8.5	25.0	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.8	15.8	8.5	25.0	0.0				3.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1036	2810	0				287	0	
V/C Ratio(X)	0.00	0.39	0.63	0.40	0.49	0.00				0.64	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1036	2810	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	17.2	27.8	15.1	0.0				33.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	2.2	0.2	0.5	0.0				2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	5.1	3.4	11.5	0.0				1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.9	19.4	28.0	15.6	0.0				36.3	0.0	0.0
LnGrp LOS	A	B	B	C	B	A				D	A	
Approach Vol, veh/h		1467			1792						184	A
Approach Delay, s/veh		17.9			18.5						36.3	
Approach LOS		B			B						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			27.9	37.3		10.8		65.2				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			11.3	* 32		18.0		48.2				
Max Q Clear Time (g_c+I1), s			10.5	17.8		5.8		27.0				
Green Ext Time (p_c), s			0.1	6.3		0.4		9.4				
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 NB Ramps & 8 Mile Road

Existing plus Phase 1 PM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	630	0	0	764	68	904	0	755	0	0	0
Future Volume (veh/h)	136	630	0	0	764	68	904	0	755	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	148	685	0	0	830	74	983	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	182	1948	0	0	2329	205	1151	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.38	0.38	0.32	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6327	534	3563	0	1585			
Grp Volume(v), veh/h	148	685	0	0	658	246	983	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1774	1781	0	1585			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	7.4	7.5	19.6	0.0	0.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	7.4	7.5	19.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.30	1.00		1.00			
Lane Grp Cap(c), veh/h	182	1948	0	0	1853	681	1151	0				
V/C Ratio(X)	0.81	0.35	0.00	0.00	0.36	0.36	0.85	0.00				
Avail Cap(c_a), veh/h	265	1948	0	0	1853	681	1467	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	16.7	16.7	24.1	0.0	0.0			
Incr Delay (d2), s/veh	10.6	0.5	0.0	0.0	0.5	1.5	4.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.0	0.0	2.4	2.8	8.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.5	0.0	0.0	17.2	18.2	28.2	0.0	0.0			
LnGrp LOS	D	A	A	A	B	B	C	A				
Approach Vol, veh/h		833			904		983		A			
Approach Delay, s/veh		7.5			17.5		28.2					
Approach LOS		A			B		C					
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.2		46.8			12.5	34.3				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 31		34.9			* 11	18.9				
Max Q Clear Time (g_c+I1), s		21.6		2.0			8.0	9.5				
Green Ext Time (p_c), s		2.9		4.3			0.1	3.5				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh	98
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	343	223	106	421	19	193	18	145	19	47	10
Future Vol, veh/h	3	343	223	106	421	19	193	18	145	19	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	373	242	115	458	21	210	20	158	21	51	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	123.9	123	35.8	15.7
HCM LOS	F	F	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	1%	19%	25%
Vol Thru, %	5%	60%	77%	62%
Vol Right, %	41%	39%	3%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	356	569	546	76
LT Vol	193	3	106	19
Through Vol	18	343	421	47
RT Vol	145	223	19	10
Lane Flow Rate	387	618	593	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.794	1.178	1.172	0.206
Departure Headway (Hd)	8.102	7.212	7.481	10.082
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	449	507	493	359
Service Time	6.102	5.212	5.481	8.082
HCM Lane V/C Ratio	0.862	1.219	1.203	0.231
HCM Control Delay	35.8	123.9	123	15.7
HCM Lane LOS	E	F	F	C
HCM 95th-tile Q	7.1	21.4	20.6	0.8

Intersection

Intersection Delay, s/veh67.4
 Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	235	270	53	216	8	328	55	86	10	34	54
Future Vol, veh/h	25	235	270	53	216	8	328	55	86	10	34	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	255	293	58	235	9	357	60	93	11	37	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	96	24.4	71.5	14.7
HCM LOS	F	C	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	70%	5%	19%	10%
Vol Thru, %	12%	44%	78%	35%
Vol Right, %	18%	51%	3%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	469	530	277	98
LT Vol	328	25	53	10
Through Vol	55	235	216	34
RT Vol	86	270	8	54
Lane Flow Rate	510	576	301	107
Geometry Grp	1	1	1	1
Degree of Util (X)	1.012	1.102	0.642	0.247
Departure Headway (Hd)	7.457	6.889	8.039	8.839
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	489	524	452	409
Service Time	5.457	4.966	6.039	6.839
HCM Lane V/C Ratio	1.043	1.099	0.666	0.262
HCM Control Delay	71.5	96	24.4	14.7
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	13.9	18.3	4.4	1

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	23	270	101	7	184	149
Future Vol, veh/h	23	270	101	7	184	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	293	110	8	200	162

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	676	114	0	0	118
Stage 1	114	-	-	-	-
Stage 2	562	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	419	939	-	-	1470
Stage 1	911	-	-	-	-
Stage 2	571	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	356	939	-	-	1470
Mov Cap-2 Maneuver	356	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	485	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1470
HCM Lane V/C Ratio	-	-	0.313	0.136
HCM Control Delay (s)	-	-	10.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.5

Intersection						
Int Delay, s/veh	10					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	242	55	93	160	194	149
Future Vol, veh/h	242	55	93	160	194	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	263	60	101	174	211	162








Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	587	- 211	0	-	0
Stage 1	211	-	-	-	-
Stage 2	376	-	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	472	0 1360	-	-	0
Stage 1	824	0	-	-	0
Stage 2	694	0	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	433	- 1360	-	-	-
Mov Cap-2 Maneuver	433	-	-	-	-
Stage 1	756	-	-	-	-
Stage 2	694	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	2.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1360	-	433	-	-
HCM Lane V/C Ratio	0.074	-	0.607	-	-
HCM Control Delay (s)	7.9	0	25.4	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.2	-	3.9	-	-

Queues
1: I-5 SB Ramps & 8 Mile Road

Existing plus Phase 1 PM
08/18/2020







							
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1047	420	413	1379	93	92	209
v/c Ratio	0.45	0.48	0.81	0.55	0.27	0.29	0.13
Control Delay	11.1	3.7	35.9	4.0	26.1	26.2	0.2
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	11.1	3.7	35.9	4.3	26.1	26.2	0.2
Queue Length 50th (ft)	96	0	91	29	37	36	0
Queue Length 95th (ft)	134	58	#165	78	77	76	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2326	875	510	2503	398	319	1583
Starvation Cap Reductn	0	0	0	533	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.48	0.81	0.70	0.23	0.29	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.













Queues
2: I-5 NB Ramps & 8 Mile Road

Existing plus Phase 1 PM
08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	148	685	904	491	492	821
v/c Ratio	0.63	0.42	0.54	0.71	0.71	0.52
Control Delay	47.9	9.3	25.0	25.4	25.5	1.2
Queue Delay	0.0	0.6	0.0	0.2	0.2	0.0
Total Delay	47.9	9.9	25.0	25.6	25.7	1.2
Queue Length 50th (ft)	73	80	105	196	196	0
Queue Length 95th (ft)	131	85	136	313	314	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	263	1625	1687	692	692	1583
Starvation Cap Reductn	0	534	0	0	0	0
Spillback Cap Reductn	0	0	61	15	15	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.63	0.56	0.73	0.73	0.52
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 Ramps SB Ramps & 8 Mile Road

Existing plus Buildout AM
 08/18/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑	
Traffic Volume (veh/h)	0	402	853	764	856	0	0	0	0	70	0	97	
Future Volume (veh/h)	0	402	853	764	856	0	0	0	0	70	0	97	
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00	
Work Zone On Approach		No			No						No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870	
Adj Flow Rate, veh/h	0	437	927	830	930	0				76	0	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92	
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2	
Cap, veh/h	0	1401	1187	1395	2976	0				173	0		
Arrive On Green	0.00	0.37	0.37	0.81	1.00	0.00				0.05	0.00	0.00	
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585	
Grp Volume(v), veh/h	0	437	927	830	930	0				76	0	0	
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585	
Q Serve(g_s), s	0.0	7.1	22.2	7.7	0.0	0.0				1.8	0.0	0.0	
Cycle Q Clear(g_c), s	0.0	7.1	22.2	7.7	0.0	0.0				1.8	0.0	0.0	
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00	
Lane Grp Cap(c), veh/h	0	1401	1187	1395	2976	0				173	0		
V/C Ratio(X)	0.00	0.31	0.78	0.60	0.31	0.00				0.44	0.00		
Avail Cap(c_a), veh/h	0	1401	1187	1395	2976	0				746	0		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.73	0.73	0.00				1.00	0.00	0.00	
Uniform Delay (d), s/veh	0.0	19.1	23.8	5.7	0.0	0.0				39.8	0.0	0.0	
Incr Delay (d2), s/veh	0.0	0.6	5.1	0.5	0.2	0.0				1.7	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	2.8	8.0	1.6	0.1	0.0				0.8	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	0.0	19.6	28.9	6.2	0.2	0.0				41.5	0.0	0.0	
LnGrp LOS	A	B	C	A	A	A				D	A		
Approach Vol, veh/h		1364			1760						76		A
Approach Delay, s/veh		25.9			3.0						41.5		
Approach LOS		C			A						D		
Timer - Assigned Phs			3	4		6		8					
Phs Duration (G+Y+Rc), s			39.8	37.3		8.9		77.1					
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1					
Max Green Setting (Gmax), s			21.3	* 32		18.0		58.2					
Max Q Clear Time (g_c+I1), s			9.7	24.2		3.8		2.0					
Green Ext Time (p_c), s			2.5	4.0		0.1		6.7					
Intersection Summary													
HCM 6th Ctrl Delay			13.7										
HCM 6th LOS			B										
Notes													
User approved volume balancing among the lanes for turning movement.													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.													

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps NB Ramps & 8 Mile Road

Existing plus Buildout AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	363	0	0	1096	132	532	2	363	0	0	0
Future Volume (veh/h)	117	363	0	0	1096	132	532	2	363	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	127	395	0	0	1191	143	579	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	558	2435	0	0	1836	219	716	0				
Arrive On Green	0.10	0.23	0.00	0.00	0.31	0.31	0.20	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6131	701	3563	0	1585			
Grp Volume(v), veh/h	127	395	0	0	978	356	579	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1744	1781	0	1585			
Q Serve(g_s), s	5.6	7.7	0.0	0.0	15.0	15.2	13.3	0.0	0.0			
Cycle Q Clear(g_c), s	5.6	7.7	0.0	0.0	15.0	15.2	13.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.40	1.00		1.00			
Lane Grp Cap(c), veh/h	558	2435	0	0	1509	546	716	0				
V/C Ratio(X)	0.23	0.16	0.00	0.00	0.65	0.65	0.81	0.00				
Avail Cap(c_a), veh/h	558	2435	0	0	1509	546	1297	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.93	0.93	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.0	13.5	0.0	0.0	25.5	25.5	32.8	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.2	6.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.3	2.4	0.0	0.0	5.4	6.4	5.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.6	0.0	0.0	27.6	31.5	35.0	0.0	0.0			
LnGrp LOS	C	B	A	A	C	C	D	A				
Approach Vol, veh/h		522			1334			579	A			
Approach Delay, s/veh		17.4			28.7			35.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.0		64.0			32.0	32.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 31		44.9			13.3	* 27				
Max Q Clear Time (g_c+I1), s		15.3		9.7			7.6	17.2				
Green Ext Time (p_c), s		1.9		2.3			0.1	5.3				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh83.1

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	319	269	136	392	13	156	23	167	12	25	8
Future Vol, veh/h	6	319	269	136	392	13	156	23	167	12	25	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	347	292	148	426	14	170	25	182	13	27	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	109.9	93.7	29.6	14
HCM LOS	F	F	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	1%	25%	27%
Vol Thru, %	7%	54%	72%	56%
Vol Right, %	48%	45%	2%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	346	594	541	45
LT Vol	156	6	136	12
Through Vol	23	319	392	25
RT Vol	167	269	13	8
Lane Flow Rate	376	646	588	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.744	1.146	1.093	0.12
Departure Headway (Hd)	7.613	6.705	7.089	9.641
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	478	549	517	374
Service Time	5.613	4.705	5.089	7.641
HCM Lane V/C Ratio	0.787	1.177	1.137	0.131
HCM Control Delay	29.6	109.9	93.7	14
HCM Lane LOS	D	F	F	B
HCM 95th-tile Q	6.2	20.9	17.7	0.4

Intersection

Intersection Delay, s/veh 35.2
 Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	121	371	74	267	8	236	38	28	4	34	58
Future Vol, veh/h	26	121	371	74	267	8	236	38	28	4	34	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	132	403	80	290	9	257	41	30	4	37	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	52.2	25.8	23.8	13.1
HCM LOS	F	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	78%	5%	21%	4%
Vol Thru, %	13%	23%	77%	35%
Vol Right, %	9%	72%	2%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	302	518	349	96
LT Vol	236	26	74	4
Through Vol	38	121	267	34
RT Vol	28	371	8	58
Lane Flow Rate	328	563	379	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.665	0.959	0.722	0.225
Departure Headway (Hd)	7.291	6.131	6.85	7.77
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	496	597	527	459
Service Time	5.357	4.131	4.914	5.867
HCM Lane V/C Ratio	0.661	0.943	0.719	0.227
HCM Control Delay	23.8	52.2	25.8	13.1
HCM Lane LOS	C	F	D	B
HCM 95th-tile Q	4.8	13.1	5.9	0.9

Intersection						
Int Delay, s/veh	6.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	15	253	129	6	323	109
Future Vol, veh/h	15	253	129	6	323	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	275	140	7	351	118

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	964	144	0	0	147
Stage 1	144	-	-	-	-
Stage 2	820	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	283	903	-	-	1435
Stage 1	883	-	-	-	-
Stage 2	433	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	209	903	-	-	1435
Mov Cap-2 Maneuver	209	-	-	-	-
Stage 1	883	-	-	-	-
Stage 2	320	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1435
HCM Lane V/C Ratio	-	-	0.304	0.245
HCM Control Delay (s)	-	-	10.4	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	1

Intersection						
Int Delay, s/veh	10.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	194	37	133	201	237	236
Future Vol, veh/h	194	37	133	201	237	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	40	145	218	258	257

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	766	- 258	0	-	0
Stage 1	258	- -	-	-	-
Stage 2	508	- -	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	- -	-	-	-
Critical Hdwy Stg 2	5.42	- -	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	371	0 1307	-	-	0
Stage 1	785	0 -	-	-	0
Stage 2	604	0 -	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	324	- 1307	-	-	-
Mov Cap-2 Maneuver	324	- -	-	-	-
Stage 1	686	- -	-	-	-
Stage 2	604	- -	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.6	3.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1307	-	324	-	-
HCM Lane V/C Ratio	0.111	-	0.651	-	-
HCM Control Delay (s)	8.1	0	34.6	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.4	-	4.3	-	-

HCM 6th Signalized Intersection Summary
 1: I-5 Ramps SB Ramps & 8 Mile Road

Existing plus Buildout AM
 08/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	402	853	764	856	0	0	0	0	70	0	97
Future Volume (veh/h)	0	402	853	764	856	0	0	0	0	70	0	97
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	437	927	830	930	0				76	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1401	1187	1395	2976	0				173	0	
Arrive On Green	0.00	0.37	0.37	0.81	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	437	927	830	930	0				76	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	7.1	22.2	7.7	0.0	0.0				1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	7.1	22.2	7.7	0.0	0.0				1.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1401	1187	1395	2976	0				173	0	
V/C Ratio(X)	0.00	0.31	0.78	0.60	0.31	0.00				0.44	0.00	
Avail Cap(c_a), veh/h	0	1401	1187	1395	2976	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.73	0.73	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.1	23.8	5.7	0.0	0.0				39.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	5.1	0.5	0.2	0.0				1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	8.0	1.6	0.1	0.0				0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.6	28.9	6.2	0.2	0.0				41.5	0.0	0.0
LnGrp LOS	A	B	C	A	A	A				D	A	
Approach Vol, veh/h		1364			1760						76	A
Approach Delay, s/veh		25.9			3.0						41.5	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			39.8	37.3		8.9		77.1				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			21.3	* 32		18.0		58.2				
Max Q Clear Time (g_c+I1), s			9.7	24.2		3.8		2.0				
Green Ext Time (p_c), s			2.5	4.0		0.1		6.7				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps NB Ramps & 8 Mile Road

Existing plus Buildout AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	363	0	0	1096	132	532	2	363	0	0	0
Future Volume (veh/h)	117	363	0	0	1096	132	532	2	363	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	127	395	0	0	1191	143	579	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	558	2435	0	0	1836	219	716	0				
Arrive On Green	0.10	0.23	0.00	0.00	0.31	0.31	0.20	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6131	701	3563	0	1585			
Grp Volume(v), veh/h	127	395	0	0	978	356	579	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1744	1781	0	1585			
Q Serve(g_s), s	5.6	7.7	0.0	0.0	15.0	15.2	13.3	0.0	0.0			
Cycle Q Clear(g_c), s	5.6	7.7	0.0	0.0	15.0	15.2	13.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.40	1.00		1.00			
Lane Grp Cap(c), veh/h	558	2435	0	0	1509	546	716	0				
V/C Ratio(X)	0.23	0.16	0.00	0.00	0.65	0.65	0.81	0.00				
Avail Cap(c_a), veh/h	558	2435	0	0	1509	546	1297	0				
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.93	0.93	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.0	13.5	0.0	0.0	25.5	25.5	32.8	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.2	6.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.3	2.4	0.0	0.0	5.4	6.4	5.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.6	0.0	0.0	27.6	31.5	35.0	0.0	0.0			
LnGrp LOS	C	B	A	A	C	C	D	A				
Approach Vol, veh/h		522			1334			579	A			
Approach Delay, s/veh		17.4			28.7			35.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.0		64.0			32.0	32.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 31		44.9			13.3	* 27				
Max Q Clear Time (g_c+I1), s		15.3		9.7			7.6	17.2				
Green Ext Time (p_c), s		1.9		2.3			0.1	5.3				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh83.1

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	319	269	136	392	13	156	23	167	12	25	8
Future Vol, veh/h	6	319	269	136	392	13	156	23	167	12	25	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	347	292	148	426	14	170	25	182	13	27	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	109.9	93.7	29.6	14
HCM LOS	F	F	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	1%	25%	27%
Vol Thru, %	7%	54%	72%	56%
Vol Right, %	48%	45%	2%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	346	594	541	45
LT Vol	156	6	136	12
Through Vol	23	319	392	25
RT Vol	167	269	13	8
Lane Flow Rate	376	646	588	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.744	1.146	1.093	0.12
Departure Headway (Hd)	7.613	6.705	7.089	9.641
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	478	549	517	374
Service Time	5.613	4.705	5.089	7.641
HCM Lane V/C Ratio	0.787	1.177	1.137	0.131
HCM Control Delay	29.6	109.9	93.7	14
HCM Lane LOS	D	F	F	B
HCM 95th-tile Q	6.2	20.9	17.7	0.4

Intersection

Intersection Delay, s/veh 35.2
 Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	121	371	74	267	8	236	38	28	4	34	58
Future Vol, veh/h	26	121	371	74	267	8	236	38	28	4	34	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	132	403	80	290	9	257	41	30	4	37	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	52.2	25.8	23.8	13.1
HCM LOS	F	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	78%	5%	21%	4%
Vol Thru, %	13%	23%	77%	35%
Vol Right, %	9%	72%	2%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	302	518	349	96
LT Vol	236	26	74	4
Through Vol	38	121	267	34
RT Vol	28	371	8	58
Lane Flow Rate	328	563	379	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.665	0.959	0.722	0.225
Departure Headway (Hd)	7.291	6.131	6.85	7.77
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	496	597	527	459
Service Time	5.357	4.131	4.914	5.867
HCM Lane V/C Ratio	0.661	0.943	0.719	0.227
HCM Control Delay	23.8	52.2	25.8	13.1
HCM Lane LOS	C	F	D	B
HCM 95th-tile Q	4.8	13.1	5.9	0.9

Intersection						
Int Delay, s/veh	6.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	15	253	129	6	323	109
Future Vol, veh/h	15	253	129	6	323	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	275	140	7	351	118

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	964	144	0	0	147
Stage 1	144	-	-	-	-
Stage 2	820	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	283	903	-	-	1435
Stage 1	883	-	-	-	-
Stage 2	433	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	209	903	-	-	1435
Mov Cap-2 Maneuver	209	-	-	-	-
Stage 1	883	-	-	-	-
Stage 2	320	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1435
HCM Lane V/C Ratio	-	-	0.304	0.245
HCM Control Delay (s)	-	-	10.4	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	1

Intersection						
Int Delay, s/veh	10.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	194	37	133	201	237	236
Future Vol, veh/h	194	37	133	201	237	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	40	145	218	258	257

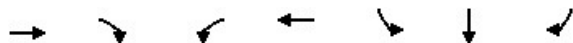
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	766	- 258	0	-	0
Stage 1	258	- -	-	-	-
Stage 2	508	- -	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	- -	-	-	-
Critical Hdwy Stg 2	5.42	- -	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	371	0 1307	-	-	0
Stage 1	785	0 -	-	-	0
Stage 2	604	0 -	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	324	- 1307	-	-	-
Mov Cap-2 Maneuver	324	- -	-	-	-
Stage 1	686	- -	-	-	-
Stage 2	604	- -	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.6	3.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1307	-	324	-	-
HCM Lane V/C Ratio	0.111	-	0.651	-	-
HCM Control Delay (s)	8.1	0	34.6	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.4	-	4.3	-	-

Queues
1: I-5 Ramps SB Ramps & 8 Mile Road

Existing plus Buildout AM
08/18/2020



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	901	463	830	930	38	38	105
v/c Ratio	0.39	0.52	0.98	0.33	0.15	0.18	0.07
Control Delay	10.4	4.3	45.1	0.7	30.0	29.9	0.1
Queue Delay	0.0	0.0	39.9	0.1	0.0	0.0	0.0
Total Delay	10.4	4.3	85.0	0.8	30.0	29.9	0.1
Queue Length 50th (ft)	80	0	244	3	17	17	0
Queue Length 95th (ft)	119	73	#362	2	45	45	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2314	894	850	2852	351	211	1583
Starvation Cap Reductn	0	0	128	709	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	1.15	0.43	0.11	0.18	0.07







Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: I-5 Ramps NB Ramps & 8 Mile Road













Existing plus Buildout AM

08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	127	395	1334	289	291	395
v/c Ratio	0.47	0.21	0.67	0.47	0.47	0.25
Control Delay	42.7	13.8	26.9	24.2	24.2	0.4
Queue Delay	0.4	1.8	2.2	0.0	0.0	0.0
Total Delay	43.1	15.6	29.2	24.2	24.2	0.4
Queue Length 50th (ft)	62	80	175	124	125	0
Queue Length 95th (ft)	112	121	215	201	203	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	273	1847	1996	611	613	1583
Starvation Cap Reductn	20	1261	0	0	0	0
Spillback Cap Reductn	0	0	499	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.67	0.89	0.47	0.47	0.25
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 SB Ramps & 8 Mile Road

Existing plus Buildout PM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	581	774	381	1279	0	0	0	0	169	3	192
Future Volume (veh/h)	0	581	774	381	1279	0	0	0	0	169	3	192
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	632	841	414	1390	0				186	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1034	2807	0				289	0	
Arrive On Green	0.00	0.42	0.42	0.10	0.26	0.00				0.08	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	632	841	414	1390	0				186	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	8.9	15.8	8.5	25.2	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.9	15.8	8.5	25.2	0.0				3.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1034	2807	0				289	0	
V/C Ratio(X)	0.00	0.40	0.63	0.40	0.50	0.00				0.64	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1034	2807	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	17.2	27.9	15.2	0.0				33.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	2.2	0.2	0.5	0.0				2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	5.1	3.4	11.6	0.0				1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.9	19.4	28.0	15.7	0.0				36.2	0.0	0.0
LnGrp LOS	A	B	B	C	B	A				D	A	
Approach Vol, veh/h		1473			1804						186	A
Approach Delay, s/veh		17.9			18.5						36.2	
Approach LOS		B			B						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			27.8	37.3		10.9			65.1			
Change Period (Y+Rc), s			5.1	* 5.1		4.7			5.1			
Max Green Setting (Gmax), s			11.3	* 32		18.0			48.2			
Max Q Clear Time (g_c+l1), s			10.5	17.8		5.8			27.2			
Green Ext Time (p_c), s			0.1	6.4		0.4			9.4			
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
2: I-5 NB Ramps & 8 Mile Road

Existing plus Buildout PM
08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	635	0	0	774	72	904	0	755	0	0	0
Future Volume (veh/h)	136	635	0	0	774	72	904	0	755	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	148	690	0	0	841	78	983	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	182	1948	0	0	2321	213	1151	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.38	0.38	0.32	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6304	554	3563	0	1585			
Grp Volume(v), veh/h	148	690	0	0	670	249	983	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1771	1781	0	1585			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	7.5	7.7	19.6	0.0	0.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	7.5	7.7	19.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.31	1.00		1.00			
Lane Grp Cap(c), veh/h	182	1948	0	0	1853	680	1151	0				
V/C Ratio(X)	0.81	0.35	0.00	0.00	0.36	0.37	0.85	0.00				
Avail Cap(c_a), veh/h	265	1948	0	0	1853	680	1467	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	16.7	16.8	24.1	0.0	0.0			
Incr Delay (d2), s/veh	10.6	0.5	0.0	0.0	0.5	1.5	4.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.0	0.0	2.4	2.9	8.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.5	0.0	0.0	17.3	18.3	28.2	0.0	0.0			
LnGrp LOS	D	A	A	A	B	B	C	A				
Approach Vol, veh/h		838			919			983	A			
Approach Delay, s/veh		7.5			17.6			28.2				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.2		46.8			12.5	34.3				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 31		34.9			* 11	18.9				
Max Q Clear Time (g_c+I1), s		21.6		2.0			8.0	9.7				
Green Ext Time (p_c), s		2.9		4.4			0.1	3.6				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh 126
 Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	356	278	106	449	19	193	18	145	19	47	10
Future Vol, veh/h	3	356	278	106	449	19	193	18	145	19	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	387	302	115	488	21	210	20	158	21	51	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	173.2	143.3	36.9	16.2
HCM LOS	F	F	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	0%	18%	25%
Vol Thru, %	5%	56%	78%	62%
Vol Right, %	41%	44%	3%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	356	637	574	76
LT Vol	193	3	106	19
Through Vol	18	356	449	47
RT Vol	145	278	19	10
Lane Flow Rate	387	692	624	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.796	1.304	1.224	0.207
Departure Headway (Hd)	8.364	7.266	7.668	10.514
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	437	505	480	344
Service Time	6.364	5.266	5.668	8.514
HCM Lane V/C Ratio	0.886	1.37	1.3	0.241
HCM Control Delay	36.9	173.2	143.3	16.2
HCM Lane LOS	E	F	F	C
HCM 95th-tile Q	7.1	27.6	22.7	0.8

Intersection

Intersection Delay, s/veh 73.7

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	240	276	53	219	8	353	55	86	10	34	54
Future Vol, veh/h	26	240	276	53	219	8	353	55	86	10	34	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	261	300	58	238	9	384	60	93	11	37	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	97.3	25.1	87.1	14.9
HCM LOS	F	D	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	5%	19%	10%
Vol Thru, %	11%	44%	78%	35%
Vol Right, %	17%	51%	3%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	494	542	280	98
LT Vol	353	26	53	10
Through Vol	55	240	219	34
RT Vol	86	276	8	54
Lane Flow Rate	537	589	304	107
Geometry Grp	1	1	1	1
Degree of Util (X)	1.066	1.104	0.65	0.248
Departure Headway (Hd)	7.484	7.101	8.182	8.989
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	489	518	444	402
Service Time	5.484	5.101	6.182	6.989
HCM Lane V/C Ratio	1.098	1.137	0.685	0.266
HCM Control Delay	87.1	97.3	25.1	14.9
HCM Lane LOS	F	F	D	B
HCM 95th-tile Q	16	18.2	4.5	1

Intersection						
Int Delay, s/veh	6.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	23	270	101	7	239	149
Future Vol, veh/h	23	270	101	7	239	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	293	110	8	260	162

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	796	114	0	0	118
Stage 1	114	-	-	-	-
Stage 2	682	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	356	939	-	-	1470
Stage 1	911	-	-	-	-
Stage 2	502	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	287	939	-	-	1470
Mov Cap-2 Maneuver	287	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	405	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1470
HCM Lane V/C Ratio	-	-	0.313	0.177
HCM Control Delay (s)	-	-	10.1	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.6

Intersection						
Int Delay, s/veh	11.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	265	55	93	162	199	150
Future Vol, veh/h	265	55	93	162	199	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	288	60	101	176	216	163

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	594	- 216	0	-	0
Stage 1	216	-	-	-	-
Stage 2	378	-	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	468	0 1354	-	-	0
Stage 1	820	0	-	-	0
Stage 2	693	0	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	429	- 1354	-	-	-
Mov Cap-2 Maneuver	429	-	-	-	-
Stage 1	752	-	-	-	-
Stage 2	693	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.9	2.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1354	-	429	-	-
HCM Lane V/C Ratio	0.075	-	0.671	-	-
HCM Control Delay (s)	7.9	0	28.9	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.2	-	4.8	-	-

HCM 6th Signalized Intersection Summary
 1: I-5 SB Ramps & 8 Mile Road

Existing plus Buildout PM
 08/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	581	774	381	1279	0	0	0	0	169	3	192
Future Volume (veh/h)	0	581	774	381	1279	0	0	0	0	169	3	192
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	632	841	414	1390	0				186	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1034	2807	0				289	0	
Arrive On Green	0.00	0.42	0.42	0.10	0.26	0.00				0.08	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	632	841	414	1390	0				186	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	8.9	15.8	8.5	25.2	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.9	15.8	8.5	25.2	0.0				3.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1034	2807	0				289	0	
V/C Ratio(X)	0.00	0.40	0.63	0.40	0.50	0.00				0.64	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1034	2807	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.2	17.2	27.9	15.2	0.0				33.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	2.2	0.2	0.5	0.0				2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	5.1	3.4	11.6	0.0				1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.9	19.4	28.0	15.7	0.0				36.2	0.0	0.0
LnGrp LOS	A	B	B	C	B	A				D	A	
Approach Vol, veh/h		1473			1804						186	A
Approach Delay, s/veh		17.9			18.5						36.2	
Approach LOS		B			B						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			27.8	37.3		10.9		65.1				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			11.3	* 32		18.0		48.2				
Max Q Clear Time (g_c+I1), s			10.5	17.8		5.8		27.2				
Green Ext Time (p_c), s			0.1	6.4		0.4		9.4				
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 NB Ramps & 8 Mile Road

Existing plus Buildout PM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	635	0	0	774	72	904	0	755	0	0	0
Future Volume (veh/h)	136	635	0	0	774	72	904	0	755	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	148	690	0	0	841	78	983	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	182	1948	0	0	2321	213	1151	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.38	0.38	0.32	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6304	554	3563	0	1585			
Grp Volume(v), veh/h	148	690	0	0	670	249	983	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1771	1781	0	1585			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	7.5	7.7	19.6	0.0	0.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	7.5	7.7	19.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.31	1.00		1.00			
Lane Grp Cap(c), veh/h	182	1948	0	0	1853	680	1151	0				
V/C Ratio(X)	0.81	0.35	0.00	0.00	0.36	0.37	0.85	0.00				
Avail Cap(c_a), veh/h	265	1948	0	0	1853	680	1467	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	16.7	16.8	24.1	0.0	0.0			
Incr Delay (d2), s/veh	10.6	0.5	0.0	0.0	0.5	1.5	4.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.0	0.0	2.4	2.9	8.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.5	0.0	0.0	17.3	18.3	28.2	0.0	0.0			
LnGrp LOS	D	A	A	A	B	B	C	A				
Approach Vol, veh/h		838			919			983	A			
Approach Delay, s/veh		7.5			17.6			28.2				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.2		46.8			12.5	34.3				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 31		34.9			* 11	18.9				
Max Q Clear Time (g_c+I1), s		21.6		2.0			8.0	9.7				
Green Ext Time (p_c), s		2.9		4.4			0.1	3.6				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Intersection Delay, s/veh 126
 Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	356	278	106	449	19	193	18	145	19	47	10
Future Vol, veh/h	3	356	278	106	449	19	193	18	145	19	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	387	302	115	488	21	210	20	158	21	51	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	173.2	143.3	36.9	16.2
HCM LOS	F	F	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	0%	18%	25%
Vol Thru, %	5%	56%	78%	62%
Vol Right, %	41%	44%	3%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	356	637	574	76
LT Vol	193	3	106	19
Through Vol	18	356	449	47
RT Vol	145	278	19	10
Lane Flow Rate	387	692	624	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.796	1.304	1.224	0.207
Departure Headway (Hd)	8.364	7.266	7.668	10.514
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	437	505	480	344
Service Time	6.364	5.266	5.668	8.514
HCM Lane V/C Ratio	0.886	1.37	1.3	0.241
HCM Control Delay	36.9	173.2	143.3	16.2
HCM Lane LOS	E	F	F	C
HCM 95th-tile Q	7.1	27.6	22.7	0.8

Intersection

Intersection Delay, s/veh 73.7
 Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	240	276	53	219	8	353	55	86	10	34	54
Future Vol, veh/h	26	240	276	53	219	8	353	55	86	10	34	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	261	300	58	238	9	384	60	93	11	37	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	97.3	25.1	87.1	14.9
HCM LOS	F	D	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	5%	19%	10%
Vol Thru, %	11%	44%	78%	35%
Vol Right, %	17%	51%	3%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	494	542	280	98
LT Vol	353	26	53	10
Through Vol	55	240	219	34
RT Vol	86	276	8	54
Lane Flow Rate	537	589	304	107
Geometry Grp	1	1	1	1
Degree of Util (X)	1.066	1.104	0.65	0.248
Departure Headway (Hd)	7.484	7.101	8.182	8.989
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	489	518	444	402
Service Time	5.484	5.101	6.182	6.989
HCM Lane V/C Ratio	1.098	1.137	0.685	0.266
HCM Control Delay	87.1	97.3	25.1	14.9
HCM Lane LOS	F	F	D	B
HCM 95th-tile Q	16	18.2	4.5	1

Intersection						
Int Delay, s/veh	6.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	23	270	101	7	239	149
Future Vol, veh/h	23	270	101	7	239	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	293	110	8	260	162

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	796	114	0	0	118
Stage 1	114	-	-	-	-
Stage 2	682	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	356	939	-	-	1470
Stage 1	911	-	-	-	-
Stage 2	502	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	287	939	-	-	1470
Mov Cap-2 Maneuver	287	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	405	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1470
HCM Lane V/C Ratio	-	-	0.313	0.177
HCM Control Delay (s)	-	-	10.1	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.6

Intersection						
Int Delay, s/veh	11.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	265	55	93	162	199	150
Future Vol, veh/h	265	55	93	162	199	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	288	60	101	176	216	163

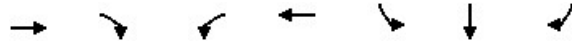
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	594	- 216	0	-	0
Stage 1	216	-	-	-	-
Stage 2	378	-	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	468	0 1354	-	-	0
Stage 1	820	0	-	-	0
Stage 2	693	0	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	429	- 1354	-	-	-
Mov Cap-2 Maneuver	429	-	-	-	-
Stage 1	752	-	-	-	-
Stage 2	693	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.9	2.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1354	-	429	-	-
HCM Lane V/C Ratio	0.075	-	0.671	-	-
HCM Control Delay (s)	7.9	0	28.9	0	-
HCM Lane LOS	A	A	D	A	-
HCM 95th %tile Q(veh)	0.2	-	4.8	-	-

Queues

1: I-5 SB Ramps & 8 Mile Road









Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1053	420	414	1390	94	93	209
v/c Ratio	0.45	0.48	0.81	0.56	0.27	0.29	0.13
Control Delay	11.2	3.7	36.0	4.0	26.1	26.3	0.2
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	11.2	3.7	36.0	4.4	26.1	26.3	0.2
Queue Length 50th (ft)	97	0	91	29	37	37	0
Queue Length 95th (ft)	136	58	#165	78	78	77	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2326	875	510	2503	398	319	1583
Starvation Cap Reductn	0	0	0	531	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.48	0.81	0.70	0.24	0.29	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.













Queues
2: I-5 NB Ramps & 8 Mile Road

Existing plus Buildout PM
08/18/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	148	690	919	491	492	821
v/c Ratio	0.63	0.42	0.55	0.71	0.71	0.52
Control Delay	47.9	9.3	25.1	25.4	25.5	1.2
Queue Delay	0.0	0.6	0.0	0.2	0.2	0.0
Total Delay	47.9	9.9	25.1	25.7	25.7	1.2
Queue Length 50th (ft)	73	80	107	196	196	0
Queue Length 95th (ft)	132	86	139	313	314	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	263	1625	1686	692	692	1583
Starvation Cap Reductn	0	532	0	0	0	0
Spillback Cap Reductn	0	0	61	16	16	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.63	0.57	0.73	0.73	0.52
Intersection Summary						

HCM 6th Signalized Intersection Summary
 1: I-5 Ramps & 8 Mile Road

EPAP AM
 08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	946	1140	471	2129	0	0	0	0	36	0	118
Future Volume (veh/h)	0	946	1140	471	2129	0	0	0	0	36	0	118
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1028	1239	512	2314	0				39	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1187	2964	0				131	0	
Arrive On Green	0.00	0.42	0.42	0.69	1.00	0.00				0.04	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	1028	1239	512	2314	0				39	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	16.6	28.1	5.0	0.0	0.0				0.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.6	28.1	5.0	0.0	0.0				0.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1187	2964	0				131	0	
V/C Ratio(X)	0.00	0.65	0.92	0.43	0.78	0.00				0.30	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1187	2964	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.37	0.37	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.4	20.7	8.6	0.0	0.0				35.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	11.9	0.1	0.8	0.0				1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	11.6	1.5	0.3	0.0				0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.5	32.6	8.7	0.8	0.0				36.9	0.0	0.0
LnGrp LOS	A	B	C	A	A	A				D	A	
Approach Vol, veh/h		2267			2826						39	A
Approach Delay, s/veh		26.7			2.2						36.9	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			31.2	37.3		7.5			68.5			
Change Period (Y+Rc), s			5.1	* 5.1		4.7			5.1			
Max Green Setting (Gmax), s			11.3	* 32		18.0			48.2			
Max Q Clear Time (g_c+I1), s			7.0	30.1		2.8			2.0			
Green Ext Time (p_c), s			0.8	1.9		0.1			34.4			
Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps & 8 Mile Road

EPAP AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	953	0	0	2369	141	684	2	397	0	0	0
Future Volume (veh/h)	91	953	0	0	2369	141	684	2	397	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	99	1036	0	0	2575	153	744	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	187	2243	0	0	2874	170	855	0				
Arrive On Green	0.10	0.63	0.00	0.00	0.46	0.46	0.24	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6521	370	3563	0	1585			
Grp Volume(v), veh/h	99	1036	0	0	1983	745	744	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1804	1781	0	1585			
Q Serve(g_s), s	4.0	11.5	0.0	0.0	28.7	28.9	15.2	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	11.5	0.0	0.0	28.7	28.9	15.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.21	1.00		1.00			
Lane Grp Cap(c), veh/h	187	2243	0	0	2216	828	855	0				
V/C Ratio(X)	0.53	0.46	0.00	0.00	0.89	0.90	0.87	0.00				
Avail Cap(c_a), veh/h	187	2243	0	0	2216	828	952	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.84	0.84	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	32.2	7.3	0.0	0.0	18.9	18.9	27.7	0.0	0.0			
Incr Delay (d2), s/veh	2.4	0.6	0.0	0.0	6.1	14.7	8.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	3.8	0.0	0.0	10.8	14.2	7.2	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	7.9	0.0	0.0	25.0	33.7	35.9	0.0	0.0			
LnGrp LOS	C	A	A	A	C	C	D	A				
Approach Vol, veh/h		1135			2728			744	A			
Approach Delay, s/veh		10.2			27.4			35.9				
Approach LOS		B			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.9		53.1			13.1	40.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 20		45.9			6.3	* 35				
Max Q Clear Time (g_c+I1), s		17.2		13.5			6.0	30.9				
Green Ext Time (p_c), s		1.0		9.1			0.0	3.8				

Intersection Summary

HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	517	409	149	556	14	189	18	186	13	20	8
Future Volume (veh/h)	7	517	409	149	556	14	189	18	186	13	20	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	562	445	162	604	15	205	20	202	14	22	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	746	632	232	983	833	266	17	438	62	82	21
Arrive On Green	0.01	0.40	0.40	0.13	0.53	0.53	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	635	62	1585	0	298	75
Grp Volume(v), veh/h	8	562	445	162	604	15	225	0	202	45	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	697	0	1585	373	0	0
Q Serve(g_s), s	0.3	19.6	17.8	6.6	17.2	0.3	0.0	0.0	8.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	19.6	17.8	6.6	17.2	0.3	21.0	0.0	8.0	21.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.91		1.00	0.31		0.20
Lane Grp Cap(c), veh/h	18	746	632	232	983	833	283	0	438	165	0	0
V/C Ratio(X)	0.44	0.75	0.70	0.70	0.61	0.02	0.79	0.00	0.46	0.27	0.00	0.00
Avail Cap(c_a), veh/h	117	746	632	244	983	833	283	0	438	165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.4	19.6	19.1	31.6	12.6	8.6	29.0	0.0	22.8	22.2	0.0	0.0
Incr Delay (d2), s/veh	15.7	6.9	6.5	6.1	2.2	0.0	14.5	0.0	0.8	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.3	7.2	3.1	6.9	0.1	5.2	0.0	3.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	26.6	25.6	37.7	14.8	8.7	43.5	0.0	23.6	23.1	0.0	0.0
LnGrp LOS	D	C	C	D	B	A	D	A	C	C	A	A
Approach Vol, veh/h		1015			781			427			45	
Approach Delay, s/veh		26.4			19.4			34.1			23.1	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.6	15.0	35.4		25.6	5.4	45.0				
Change Period (Y+Rc), s		4.6	5.1	* 5.1		4.6	4.6	5.1				
Max Green Setting (Gmax), s		21.0	10.4	* 30		21.0	5.0	35.7				
Max Q Clear Time (g_c+I1), s		23.0	8.6	21.6		23.0	2.3	19.2				
Green Ext Time (p_c), s		0.0	0.1	3.6		0.0	0.0	3.8				
Intersection Summary												
HCM 6th Ctrl Delay					25.4							
HCM 6th LOS					C							
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	188	460	50	390	7	265	26	19	3	19	69
Future Volume (veh/h)	38	188	460	50	390	7	265	26	19	3	19	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	204	500	54	424	8	288	28	21	3	21	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	629	533	90	505	428	362	202	151	16	114	111
Arrive On Green	0.11	0.34	0.34	0.05	0.27	0.27	0.20	0.20	0.20	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	992	744	232	1626	1585
Grp Volume(v), veh/h	41	204	500	54	424	8	288	0	49	24	0	75
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1736	1859	0	1585
Q Serve(g_s), s	1.2	4.6	17.2	1.7	12.0	0.2	8.6	0.0	1.3	0.7	0.0	2.6
Cycle Q Clear(g_c), s	1.2	4.6	17.2	1.7	12.0	0.2	8.6	0.0	1.3	0.7	0.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	0.12		1.00
Lane Grp Cap(c), veh/h	193	629	533	90	505	428	362	0	353	130	0	111
V/C Ratio(X)	0.21	0.32	0.94	0.60	0.84	0.02	0.80	0.00	0.14	0.18	0.00	0.68
Avail Cap(c_a), veh/h	193	629	533	158	629	533	666	0	649	695	0	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	13.9	18.1	26.1	19.4	15.1	21.3	0.0	18.4	24.6	0.0	25.5
Incr Delay (d2), s/veh	0.5	0.3	24.5	6.2	8.2	0.0	4.0	0.0	0.2	0.7	0.0	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr	0.5	1.8	9.1	0.8	5.8	0.1	3.7	0.0	0.5	0.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	14.2	42.6	32.3	27.6	15.1	25.3	0.0	18.5	25.3	0.0	32.5
LnGrp LOS	C	B	D	C	C	B	C	A	B	C	A	C
Approach Vol, veh/h		745			486			337			99	
Approach Delay, s/veh		33.8			27.9			24.3			30.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.1	7.4	24.0		8.6	11.2	20.3				
Change Period (Y+Rc), s		* 4.7	4.6	5.1		4.7	5.1	* 5.1				
Max Green Setting (Gmax), s		* 21	5.0	18.9		21.0	5.0	* 19				
Max Q Clear Time (g_c+l1), s		10.6	3.7	19.2		4.6	3.2	14.0				
Green Ext Time (p_c), s		0.8	0.0	0.0		0.3	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay					30.0							
HCM 6th LOS					C							
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	7.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	14	297	103	1	469	106
Future Vol, veh/h	14	297	103	1	469	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	323	112	1	510	115

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1248	113	0	0	113
Stage 1	113	-	-	-	-
Stage 2	1135	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	191	940	-	-	1476
Stage 1	912	-	-	-	-
Stage 2	307	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	121	940	-	-	1476
Mov Cap-2 Maneuver	121	-	-	-	-
Stage 1	912	-	-	-	-
Stage 2	194	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	7.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	984	1476
HCM Lane V/C Ratio	-	-	0.344	0.345
HCM Control Delay (s)	-	-	10.6	8.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.5	1.6

Intersection						
Int Delay, s/veh	8.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	154	50	152	197	301	233
Future Vol, veh/h	154	50	152	197	301	233
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	167	54	165	214	327	253

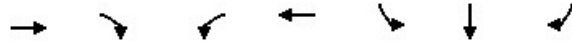
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	871	-	327	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	322	0	1233	-	-	0
Stage 1	731	0	-	-	-	0
Stage 2	582	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	273	-	1233	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37	3.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1233	-	273	-	-
HCM Lane V/C Ratio	0.134	-	0.613	-	-
HCM Control Delay (s)	8.4	0	37	0	-
HCM Lane LOS	A	A	E	A	-
HCM 95th %tile Q(veh)	0.5	-	3.7	-	-

Queues
1: I-5 Ramps & 8 Mile Road

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Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1648	619	512	2314	19	20	128
v/c Ratio	0.53	0.56	1.00	0.71	0.10	0.25	0.08
Control Delay	7.9	3.4	54.4	5.4	28.6	30.3	0.1
Queue Delay	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	3.4	54.4	5.4	28.6	30.3	0.1
Queue Length 50th (ft)	83	0	~129	71	9	~21	0
Queue Length 95th (ft)	281	72	m#173	#756	24	25	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	3090	1111	510	3280	398	80	1583
Starvation Cap Reductn	0	0	0	17	0	0	0
Spillback Cap Reductn	371	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.56	1.00	0.71	0.05	0.25	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: I-5 Ramps & 8 Mile Road

EPAP AM
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Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	99	1036	2728	371	374	432
v/c Ratio	0.68	0.48	0.88	0.83	0.83	0.27
Control Delay	61.4	11.4	22.5	43.9	44.3	0.4
Queue Delay	0.0	1.7	0.6	0.5	0.5	0.0
Total Delay	61.4	13.1	23.1	44.4	44.8	0.4
Queue Length 50th (ft)	51	195	335	172	174	0
Queue Length 95th (ft)	m#117	33	#413	#322	#325	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	146	2137	3113	449	450	1583
Starvation Cap Reductn	0	879	0	0	0	0
Spillback Cap Reductn	0	0	126	6	6	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.82	0.91	0.84	0.84	0.27

Intersection Summary

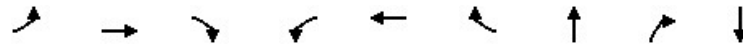
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road



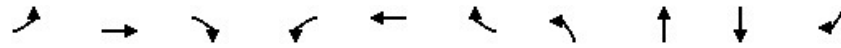
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	8	562	445	162	604	15	225	202	45
v/c Ratio	0.06	0.67	0.47	0.67	0.52	0.01	0.76	0.39	0.12
Control Delay	34.4	22.8	3.5	46.5	12.0	0.0	43.2	6.0	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	22.8	3.5	46.5	12.0	0.0	43.2	6.0	18.9
Queue Length 50th (ft)	4	205	0	74	135	0	98	0	13
Queue Length 95th (ft)	17	#348	53	#154	330	0	166	46	36
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	125	837	956	242	1158	1017	366	583	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.67	0.47	0.67	0.52	0.01	0.61	0.35	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	204	500	54	424	8	288	49	24	75
v/c Ratio	0.26	0.32	0.57	0.34	0.67	0.01	0.65	0.11	0.11	0.20
Control Delay	34.4	20.6	5.5	36.3	28.1	0.0	28.6	13.4	29.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	20.6	5.5	36.3	28.1	0.0	28.6	13.4	29.5	1.2
Queue Length 50th (ft)	16	64	0	21	152	0	103	9	9	0
Queue Length 95th (ft)	47	132	69	#59	#333	0	181	32	31	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	160	637	870	160	637	639	672	676	704	733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.32	0.57	0.34	0.67	0.01	0.43	0.07	0.03	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 1: I-5 Ramps & 8 Mile Road

EPAP PM
 08/19/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1577	1079	167	3082	0	0	0	0	108	0	234
Future Volume (veh/h)	0	1577	1079	167	3082	0	0	0	0	108	0	234
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1594	1253	182	3350	0				117	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2279	1931	749	3086	0				178	0	
Arrive On Green	0.00	0.61	0.61	0.43	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	1594	1253	182	3350	0				117	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	34.8	30.7	4.0	0.0	0.0				3.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	34.8	30.7	4.0	0.0	0.0				3.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2279	1931	749	3086	0				178	0	
V/C Ratio(X)	0.00	0.70	0.65	0.24	1.09	0.00				0.66	0.00	
Avail Cap(c_a), veh/h	0	2279	1931	749	3086	0				573	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.10	0.10	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.0	15.2	27.8	0.0	0.0				56.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	1.7	0.0	39.3	0.0				4.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.7	11.0	1.6	16.8	0.0				1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.8	16.9	27.8	39.3	0.0				60.0	0.0	0.0
LnGrp LOS	A	B	B	C	F	A				E	A	
Approach Vol, veh/h		2847			3532						117	A
Approach Delay, s/veh		17.4			38.7						60.0	
Approach LOS		B			D						E	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			31.1	78.2		10.7		109.3				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			13.1	* 73		19.3		90.9				
Max Q Clear Time (g_c+I1), s			6.0	36.8		5.9		2.0				
Green Ext Time (p_c), s			0.3	27.3		0.3		84.7				
Intersection Summary												
HCM 6th Ctrl Delay			29.7									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps & 8 Mile Road

EPAP PM
 08/19/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↖	↗	↘	↖	↗			
Traffic Volume (veh/h)	137	1755	0	0	2035	70	1229	0	666	0	0	0
Future Volume (veh/h)	137	1755	0	0	2035	70	1229	0	666	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	149	1908	0	0	2212	76	1336	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	175	1878	0	0	2516	86	1389	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.39	0.39	0.39	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6697	221	3563	0	1585			
Grp Volume(v), veh/h	149	1908	0	0	1658	630	1336	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1831	1781	0	1585			
Q Serve(g_s), s	9.7	0.0	0.0	0.0	38.3	38.3	43.9	0.0	0.0			
Cycle Q Clear(g_c), s	9.7	0.0	0.0	0.0	38.3	38.3	43.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	175	1878	0	0	1887	716	1389	0				
V/C Ratio(X)	0.85	1.02	0.00	0.00	0.88	0.88	0.96	0.00				
Avail Cap(c_a), veh/h	272	1878	0	0	1887	716	1404	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.62	0.62	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	47.4	0.0	0.0	0.0	33.9	33.9	35.7	0.0	0.0			
Incr Delay (d2), s/veh	9.3	20.5	0.0	0.0	6.2	14.5	15.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	5.3	0.0	0.0	15.8	19.6	21.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	20.5	0.0	0.0	40.1	48.4	51.5	0.0	0.0			
LnGrp LOS	E	F	A	A	D	D	D	A				
Approach Vol, veh/h		2057			2288			1336	A			
Approach Delay, s/veh		23.1			42.4			51.5				
Approach LOS		C			D			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		51.5		68.5			16.5	52.0				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 47		62.9			* 18	39.9				
Max Q Clear Time (g_c+I1), s		45.9		2.0			11.7	40.3				
Green Ext Time (p_c), s		0.9		30.1			0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				37.6								
HCM 6th LOS				D								

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP PM
 08/19/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	560	385	116	779	20	244	15	159	21	40	11
Future Volume (veh/h)	4	560	385	116	779	20	244	15	159	21	40	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	609	418	126	847	22	265	16	173	23	43	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	756	641	274	1047	887	286	11	476	67	103	19
Arrive On Green	0.01	0.40	0.40	0.15	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	621	38	1585	0	342	62
Grp Volume(v), veh/h	4	609	418	126	847	22	281	0	173	78	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	659	0	1585	404	0	0
Q Serve(g_s), s	0.2	20.1	14.9	4.5	25.5	0.4	0.0	0.0	6.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	20.1	14.9	4.5	25.5	0.4	21.0	0.0	6.0	21.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.94		1.00	0.29		0.15
Lane Grp Cap(c), veh/h	10	756	641	274	1047	887	298	0	476	188	0	0
V/C Ratio(X)	0.42	0.81	0.65	0.46	0.81	0.02	0.94	0.00	0.36	0.42	0.00	0.00
Avail Cap(c_a), veh/h	127	756	641	274	1047	887	298	0	476	188	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.59	0.59	0.59	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.7	18.4	16.9	27.0	12.4	6.9	27.6	0.0	19.3	19.8	0.0	0.0
Incr Delay (d2), s/veh	26.8	8.9	5.1	0.7	4.1	0.0	37.5	0.0	0.5	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr	0.1	9.7	5.9	1.9	10.0	0.1	7.7	0.0	2.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	27.4	22.0	27.7	16.5	6.9	65.1	0.0	19.7	21.3	0.0	0.0
LnGrp LOS	E	C	C	C	B	A	E	A	B	C	A	A
Approach Vol, veh/h		1031			995			454			78	
Approach Delay, s/veh		25.3			17.7			47.8			21.3	
Approach LOS		C			B			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.6	15.9	33.4		25.6	5.0	44.3				
Change Period (Y+Rc), s		4.6	5.1	* 5.1		4.6	4.6	5.1				
Max Green Setting (Gmax), s		21.0	6.4	* 28		21.0	5.0	29.7				
Max Q Clear Time (g_c+I1), s		23.0	6.5	22.1		23.0	2.2	27.5				
Green Ext Time (p_c), s		0.0	0.0	2.9		0.0	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay					26.2							
HCM 6th LOS					C							
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP PM
 08/19/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	383	333	41	352	7	526	42	70	8	22	68
Future Volume (veh/h)	36	383	333	41	352	7	526	42	70	8	22	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	416	0	45	383	8	572	46	76	9	24	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	476		74	496	420	633	225	372	34	92	109
Arrive On Green	0.04	0.25	0.00	0.04	0.27	0.27	0.36	0.36	0.36	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	634	1048	503	1342	1585
Grp Volume(v), veh/h	39	416	0	45	383	8	572	0	122	33	0	74
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1682	1845	0	1585
Q Serve(g_s), s	1.5	14.9	0.0	1.7	13.2	0.3	21.3	0.0	3.5	1.2	0.0	3.2
Cycle Q Clear(g_c), s	1.5	14.9	0.0	1.7	13.2	0.3	21.3	0.0	3.5	1.2	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	0.27		1.00
Lane Grp Cap(c), veh/h	68	476		74	496	420	633	0	598	126	0	109
V/C Ratio(X)	0.58	0.87		0.61	0.77	0.02	0.90	0.00	0.20	0.26	0.00	0.68
Avail Cap(c_a), veh/h	127	551		127	551	467	746	0	704	554	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.1	25.0	0.0	33.0	23.8	19.0	21.4	0.0	15.7	30.9	0.0	31.8
Incr Delay (d2), s/veh	7.5	13.2	0.0	7.7	6.1	0.0	13.0	0.0	0.2	1.1	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.9	0.0	0.9	6.3	0.1	10.4	0.0	1.3	0.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	38.2	0.0	40.7	29.8	19.0	34.4	0.0	15.8	32.0	0.0	39.1
LnGrp LOS	D	D		D	C	B	C	A	B	C	A	D
Approach Vol, veh/h		455	A		436			694			107	
Approach Delay, s/veh		38.4			30.7			31.2			36.9	
Approach LOS		D			C			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		29.6	8.0	22.9		9.5	7.3	23.7				
Change Period (Y+Rc), s		* 4.7	5.1	* 5.1		4.7	4.6	5.1				
Max Green Setting (Gmax), s		* 29	5.0	* 21		21.0	5.0	20.6				
Max Q Clear Time (g_c+I1), s		23.3	3.7	16.9		5.2	3.5	15.2				
Green Ext Time (p_c), s		1.5	0.0	0.9		0.3	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	7.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	26	335	112	7	382	143
Future Vol, veh/h	26	335	112	7	382	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	364	122	8	415	155

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1111	126	0	0	130
Stage 1	126	-	-	-	-
Stage 2	985	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	231	924	-	-	1455
Stage 1	900	-	-	-	-
Stage 2	362	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	159	924	-	-	1455
Mov Cap-2 Maneuver	159	-	-	-	-
Stage 1	900	-	-	-	-
Stage 2	249	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1455
HCM Lane V/C Ratio	-	-	0.394	0.285
HCM Control Delay (s)	-	-	10.9	8.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.9	1.2

Intersection						
Int Delay, s/veh	32.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷		↶	↷	
Traffic Vol, veh/h	395	50	60	234	204	188
Future Vol, veh/h	395	50	60	234	204	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	429	54	65	254	222	204

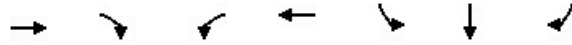
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	606	-	222	0	-
Stage 1	222	-	-	-	-
Stage 2	384	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-
Pot Cap-1 Maneuver	460	0	1347	-	-
Stage 1	815	0	-	-	-
Stage 2	688	0	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	434	-	1347	-	-
Mov Cap-2 Maneuver	434	-	-	-	-
Stage 1	769	-	-	-	-
Stage 2	688	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	71.7	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1347	-	434	-	-
HCM Lane V/C Ratio	0.048	-	0.989	-	-
HCM Control Delay (s)	7.8	0	71.7	0	-
HCM Lane LOS	A	A	F	A	-
HCM 95th %tile Q(veh)	0.2	-	12.4	-	-

Queues
1: I-5 Ramps & 8 Mile Road

EPAP PM
08/19/2020



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2230	657	182	3350	58	59	254
v/c Ratio	0.73	0.59	0.49	1.17	0.25	0.27	0.16
Control Delay	16.4	3.2	45.2	97.5	47.2	47.5	0.2
Queue Delay	0.1	0.0	0.0	0.4	9.7	110.6	0.0
Total Delay	16.4	3.2	45.2	97.9	56.8	158.2	0.2
Queue Length 50th (ft)	445	0	69	~1717	42	42	0
Queue Length 95th (ft)	513	52	m70	m#1728	84	85	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	3050	1114	374	2852	270	216	1583
Starvation Cap Reductn	0	0	0	488	0	0	0
Spillback Cap Reductn	73	0	0	0	180	180	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.59	0.49	1.42	0.64	1.64	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: I-5 Ramps & 8 Mile Road

EPAP PM
08/19/2020



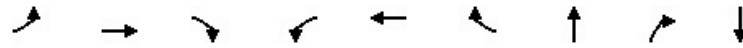
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	149	1908	2288	668	668	724
v/c Ratio	0.69	1.03	0.99	1.01	1.01	0.46
Control Delay	78.3	45.1	54.8	74.0	74.0	1.0
Queue Delay	2.4	1.2	0.0	32.1	32.1	0.0
Total Delay	80.7	46.2	54.8	106.1	106.1	1.0
Queue Length 50th (ft)	115	~835	~512	~548	~548	0
Queue Length 95th (ft)	m158	#955	#650	#813	#813	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	269	1855	2312	662	662	1583
Starvation Cap Reductn	48	6	0	0	0	0
Spillback Cap Reductn	0	0	0	75	75	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.03	0.99	1.14	1.14	0.46

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	4	609	418	126	847	22	281	173	78
v/c Ratio	0.03	0.74	0.45	0.78	0.80	0.02	0.77	0.31	0.18
Control Delay	30.8	24.5	3.4	65.3	22.2	0.1	38.6	4.6	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	24.5	3.4	65.3	22.2	0.1	38.6	4.6	17.4
Queue Length 50th (ft)	2	220	0	54	260	0	107	0	21
Queue Length 95th (ft)	10	#398	49	#139	#620	0	#204	36	50
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	134	822	932	161	1064	945	416	603	483
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.74	0.45	0.78	0.80	0.02	0.68	0.29	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	39	416	362	45	383	8	572	122	33	74
v/c Ratio	0.33	0.80	0.52	0.38	0.74	0.02	0.82	0.17	0.20	0.23
Control Delay	44.3	41.6	6.0	46.1	37.3	0.0	34.4	8.9	36.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	41.6	6.0	46.1	37.3	0.0	34.4	8.9	36.8	1.7
Queue Length 50th (ft)	19	202	0	22	182	0	267	15	16	0
Queue Length 95th (ft)	51	#374	64	56	#333	0	#476	51	43	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200	250			
Base Capacity (vph)	119	519	702	119	519	532	701	715	522	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.80	0.52	0.38	0.74	0.02	0.82	0.17	0.06	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
1: I-5 Ramps & 8 Mile Road

EPAP plus Buildout AM
08/18/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	956	1140	471	2133	0	0	0	0	39	0	118
Future Volume (veh/h)	0	956	1140	471	2133	0	0	0	0	39	0	118
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1039	1239	512	2318	0				42	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1585	1343	1180	2958	0				138	0	
Arrive On Green	0.00	0.42	0.42	0.68	1.00	0.00				0.04	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	1039	1239	512	2318	0				42	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	16.8	28.1	5.1	0.0	0.0				0.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.8	28.1	5.1	0.0	0.0				0.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1585	1343	1180	2958	0				138	0	
V/C Ratio(X)	0.00	0.66	0.92	0.43	0.78	0.00				0.30	0.00	
Avail Cap(c_a), veh/h	0	1585	1343	1180	2958	0				844	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.37	0.37	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.5	20.7	8.7	0.0	0.0				35.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	11.9	0.1	0.8	0.0				1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.1	11.6	1.5	0.3	0.0				0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.6	32.6	8.8	0.8	0.0				36.8	0.0	0.0
LnGrp LOS	A	B	C	A	A	A				D	A	
Approach Vol, veh/h		2278			2830						42	A
Approach Delay, s/veh		26.7			2.3						36.8	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			31.1	37.3		7.6		68.4				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			11.3	* 32		18.0		48.2				
Max Q Clear Time (g_c+I1), s			7.1	30.1		2.9		2.0				
Green Ext Time (p_c), s			0.8	1.9		0.1		34.5				
Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps & 8 Mile Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	966	0	0	2373	142	684	2	397	0	0	0
Future Volume (veh/h)	91	966	0	0	2373	142	684	2	397	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	99	1050	0	0	2579	154	744	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	187	2243	0	0	2873	171	855	0				
Arrive On Green	0.10	0.63	0.00	0.00	0.46	0.46	0.24	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6519	372	3563	0	1585			
Grp Volume(v), veh/h	99	1050	0	0	1986	747	744	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1803	1781	0	1585			
Q Serve(g_s), s	4.0	11.8	0.0	0.0	28.8	29.0	15.2	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	11.8	0.0	0.0	28.8	29.0	15.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.21	1.00		1.00			
Lane Grp Cap(c), veh/h	187	2243	0	0	2216	828	855	0				
V/C Ratio(X)	0.53	0.47	0.00	0.00	0.90	0.90	0.87	0.00				
Avail Cap(c_a), veh/h	187	2243	0	0	2216	828	952	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	32.2	7.3	0.0	0.0	18.9	19.0	27.7	0.0	0.0			
Incr Delay (d2), s/veh	2.2	0.6	0.0	0.0	6.2	14.9	8.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	3.8	0.0	0.0	10.9	14.3	7.2	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	7.9	0.0	0.0	25.1	33.9	35.9	0.0	0.0			
LnGrp LOS	C	A	A	A	C	C	D	A				
Approach Vol, veh/h		1149			2733			744	A			
Approach Delay, s/veh		10.2			27.5			35.9				
Approach LOS		B			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.9		53.1			13.1	40.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 20		45.9			6.3	* 35				
Max Q Clear Time (g_c+I1), s		17.2		13.8			6.0	31.0				
Green Ext Time (p_c), s		1.0		9.3			0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP plus Buildout AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	520	424	149	605	14	190	18	186	13	20	8
Future Volume (veh/h)	7	520	424	149	605	14	190	18	186	13	20	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	565	461	162	658	15	207	20	202	14	22	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	746	632	232	983	833	266	17	438	62	82	21
Arrive On Green	0.01	0.40	0.40	0.13	0.53	0.53	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	635	61	1585	0	298	75
Grp Volume(v), veh/h	8	565	461	162	658	15	227	0	202	45	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	696	0	1585	373	0	0
Q Serve(g_s), s	0.3	19.8	18.7	6.6	19.6	0.3	0.0	0.0	8.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	19.8	18.7	6.6	19.6	0.3	21.0	0.0	8.0	21.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.91		1.00	0.31		0.20
Lane Grp Cap(c), veh/h	18	746	632	232	983	833	283	0	438	165	0	0
V/C Ratio(X)	0.44	0.76	0.73	0.70	0.67	0.02	0.80	0.00	0.46	0.27	0.00	0.00
Avail Cap(c_a), veh/h	117	746	632	244	983	833	283	0	438	165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.4	19.7	19.4	31.6	13.2	8.6	29.1	0.0	22.8	22.2	0.0	0.0
Incr Delay (d2), s/veh	15.7	7.1	7.3	5.9	2.6	0.0	15.2	0.0	0.8	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr	0.2	9.4	7.7	3.1	8.0	0.1	5.3	0.0	3.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	26.8	26.6	37.5	15.8	8.7	44.3	0.0	23.6	23.1	0.0	0.0
LnGrp LOS	D	C	C	D	B	A	D	A	C	C	A	A
Approach Vol, veh/h		1034			835			429			45	
Approach Delay, s/veh		26.9			19.9			34.5			23.1	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.6	15.0	35.4		25.6	5.4	45.0				
Change Period (Y+Rc), s		4.6	5.1	* 5.1		4.6	4.6	5.1				
Max Green Setting (Gmax), s		21.0	10.4	* 30		21.0	5.0	35.7				
Max Q Clear Time (g_c+I1), s		23.0	8.6	21.8		23.0	2.3	21.6				
Green Ext Time (p_c), s		0.0	0.1	3.6		0.0	0.0	3.9				
Intersection Summary												
HCM 6th Ctrl Delay					25.7							
HCM 6th LOS					C							
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP plus Buildout AM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	190	461	50	395	7	308	26	19	3	19	70
Future Volume (veh/h)	38	190	461	50	395	7	308	26	19	3	19	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	207	501	54	429	8	335	28	21	3	21	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	608	515	89	504	427	406	226	170	16	112	109
Arrive On Green	0.10	0.32	0.32	0.05	0.27	0.27	0.23	0.23	0.23	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	992	744	232	1626	1585
Grp Volume(v), veh/h	41	207	501	54	429	8	335	0	49	24	0	76
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1736	1859	0	1585
Q Serve(g_s), s	1.2	4.9	18.2	1.7	12.6	0.2	10.4	0.0	1.3	0.7	0.0	2.7
Cycle Q Clear(g_c), s	1.2	4.9	18.2	1.7	12.6	0.2	10.4	0.0	1.3	0.7	0.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	0.12		1.00
Lane Grp Cap(c), veh/h	172	608	515	89	504	427	406	0	396	128	0	109
V/C Ratio(X)	0.24	0.34	0.97	0.61	0.85	0.02	0.82	0.00	0.12	0.19	0.00	0.70
Avail Cap(c_a), veh/h	172	608	515	153	608	515	643	0	627	671	0	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	14.9	19.4	27.1	20.1	15.6	21.4	0.0	17.8	25.6	0.0	26.5
Incr Delay (d2), s/veh	0.7	0.3	32.7	6.5	9.6	0.0	4.9	0.0	0.1	0.7	0.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	10.6	0.9	6.3	0.1	4.5	0.0	0.5	0.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	15.2	52.1	33.5	29.8	15.6	26.2	0.0	18.0	26.3	0.0	34.2
LnGrp LOS	C	B	D	C	C	B	C	A	B	C	A	C
Approach Vol, veh/h		749			491			384			100	
Approach Delay, s/veh		40.4			29.9			25.2			32.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.0	7.5	24.0		8.7	10.7	20.8				
Change Period (Y+Rc), s		* 4.7	4.6	5.1		4.7	5.1	* 5.1				
Max Green Setting (Gmax), s		* 21	5.0	18.9		21.0	5.0	* 19				
Max Q Clear Time (g_c+I1), s		12.4	3.7	20.2		4.7	3.2	14.6				
Green Ext Time (p_c), s		0.9	0.0	0.0		0.3	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	7.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	14	298	103	1	484	106
Future Vol, veh/h	14	298	103	1	484	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	324	112	1	526	115

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1280	113	0	0	113
Stage 1	113	-	-	-	-
Stage 2	1167	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	183	940	-	-	1476
Stage 1	912	-	-	-	-
Stage 2	296	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	113	940	-	-	1476
Mov Cap-2 Maneuver	113	-	-	-	-
Stage 1	912	-	-	-	-
Stage 2	183	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	7.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	984	1476
HCM Lane V/C Ratio	-	-	0.345	0.356
HCM Control Delay (s)	-	-	10.6	8.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.5	1.6

Intersection						
Int Delay, s/veh	13.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	196	50	152	197	301	233
Future Vol, veh/h	196	50	152	197	301	233
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	54	165	214	327	253

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	871	-	327	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	322	0	1233	-	-	0
Stage 1	731	0	-	-	-	0
Stage 2	582	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	273	-	1233	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	52.9	3.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1233	-	273	-	-
HCM Lane V/C Ratio	0.134	-	0.78	-	-
HCM Control Delay (s)	8.4	0	52.9	0	-
HCM Lane LOS	A	A	F	A	-
HCM 95th %tile Q(veh)	0.5	-	5.9	-	-

Queues
1: I-5 Ramps & 8 Mile Road

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1659	619	512	2318	21	21	128
v/c Ratio	0.59	0.58	1.00	0.77	0.09	0.13	0.08
Control Delay	11.1	4.0	54.3	7.3	25.5	24.5	0.1
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	4.0	54.3	7.3	25.5	24.5	0.1
Queue Length 50th (ft)	84	0	~129	72	9	~22	0
Queue Length 95th (ft)	284	72	m#172	#759	26	26	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	2833	1066	510	3021	398	159	1583
Starvation Cap Reductn	0	0	0	17	0	0	0
Spillback Cap Reductn	388	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.58	1.00	0.77	0.05	0.13	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: I-5 Ramps & 8 Mile Road



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	99	1050	2733	371	374	432
v/c Ratio	0.68	0.49	0.88	0.83	0.83	0.27
Control Delay	57.6	9.0	22.5	43.9	44.3	0.4
Queue Delay	0.0	1.8	0.6	0.5	0.5	0.0
Total Delay	57.6	10.8	23.2	44.4	44.8	0.4
Queue Length 50th (ft)	51	199	336	172	174	0
Queue Length 95th (ft)	m#101	34	#416	#322	#325	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	146	2137	3113	449	450	1583
Starvation Cap Reductn	0	872	0	0	0	0
Spillback Cap Reductn	0	0	126	6	6	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.83	0.91	0.84	0.84	0.27










Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

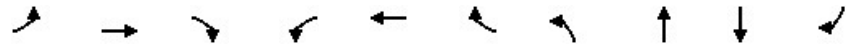
Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	8	565	461	162	658	15	227	202	45
v/c Ratio	0.06	0.68	0.48	0.67	0.57	0.01	0.76	0.39	0.12
Control Delay	34.4	23.0	3.5	46.5	12.9	0.0	43.4	6.0	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	23.0	3.5	46.5	12.9	0.0	43.4	6.0	18.9
Queue Length 50th (ft)	4	207	0	74	154	0	99	0	13
Queue Length 95th (ft)	17	#354	54	#154	375	0	167	46	36
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	125	836	964	242	1157	1016	366	583	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.68	0.48	0.67	0.57	0.01	0.62	0.35	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues
13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	207	501	54	429	8	335	49	24	76
v/c Ratio	0.27	0.34	0.58	0.35	0.70	0.01	0.69	0.10	0.12	0.21
Control Delay	35.5	21.7	5.6	37.6	30.4	0.0	29.3	13.0	30.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	21.7	5.6	37.6	30.4	0.0	29.3	13.0	30.3	1.3
Queue Length 50th (ft)	17	69	0	22	165	0	124	9	9	0
Queue Length 95th (ft)	47	134	70	#59	#338	0	213	32	31	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	154	616	859	154	616	622	650	654	680	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.34	0.58	0.35	0.70	0.01	0.52	0.07	0.04	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
1: I-5 Ramps & 8 Mile Road

EPAP plus Buildout PM
08/18/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑	
Traffic Volume (veh/h)	0	1582	1079	168	3093	0	0	0	0	110	0	234	
Future Volume (veh/h)	0	1582	1079	168	3093	0	0	0	0	110	0	234	
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00	
Work Zone On Approach		No			No						No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870	
Adj Flow Rate, veh/h	0	1596	1255	183	3362	0				120	0	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92	
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2	
Cap, veh/h	0	2279	1931	745	3082	0				182	0		
Arrive On Green	0.00	0.61	0.61	0.43	1.00	0.00				0.05	0.00	0.00	
Sat Flow, veh/h	0	3741	3170	3456	3647	0				3563	0	1585	
Grp Volume(v), veh/h	0	1596	1255	183	3362	0				120	0	0	
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585	
Q Serve(g_s), s	0.0	34.9	30.7	4.0	0.0	0.0				4.0	0.0	0.0	
Cycle Q Clear(g_c), s	0.0	34.9	30.7	4.0	0.0	0.0				4.0	0.0	0.0	
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00	
Lane Grp Cap(c), veh/h	0	2279	1931	745	3082	0				182	0		
V/C Ratio(X)	0.00	0.70	0.65	0.25	1.09	0.00				0.66	0.00		
Avail Cap(c_a), veh/h	0	2279	1931	745	3082	0				573	0		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	0.00	
Uniform Delay (d), s/veh	0.0	16.0	15.2	27.9	0.0	0.0				55.9	0.0	0.0	
Incr Delay (d2), s/veh	0.0	1.8	1.7	0.0	41.5	0.0				4.1	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	14.7	11.0	1.6	17.8	0.0				1.9	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	0.0	17.8	16.9	27.9	41.5	0.0				60.0	0.0	0.0	
LnGrp LOS	A	B	B	C	F	A				E	A		
Approach Vol, veh/h		2851			3545						120		A
Approach Delay, s/veh		17.4			40.8						60.0		
Approach LOS		B			D						E		
Timer - Assigned Phs			3	4		6			8				
Phs Duration (G+Y+Rc), s			31.0	78.2		10.8			109.2				
Change Period (Y+Rc), s			5.1	* 5.1		4.7			5.1				
Max Green Setting (Gmax), s			13.1	* 73		19.3			90.9				
Max Q Clear Time (g_c+I1), s			6.0	36.9		6.0			2.0				
Green Ext Time (p_c), s			0.3	27.3		0.3			84.8				
Intersection Summary													
HCM 6th Ctrl Delay			30.9										
HCM 6th LOS			C										
Notes													
User approved volume balancing among the lanes for turning movement.													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.													

HCM 6th Signalized Intersection Summary
 2: I-5 Ramps & 8 Mile Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	1761	0	0	2046	74	1229	0	666	0	0	0
Future Volume (veh/h)	137	1761	0	0	2046	74	1229	0	666	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	149	1914	0	0	2224	80	1336	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	175	1878	0	0	2511	90	1389	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.39	0.39	0.39	0.00	0.00			
Sat Flow, veh/h	1781	3647	0	0	6685	231	3563	0	1585			
Grp Volume(v), veh/h	149	1914	0	0	1670	634	1336	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1609	1829	1781	0	1585			
Q Serve(g_s), s	9.7	0.0	0.0	0.0	38.7	38.7	43.9	0.0	0.0			
Cycle Q Clear(g_c), s	9.7	0.0	0.0	0.0	38.7	38.7	43.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.13	1.00		1.00			
Lane Grp Cap(c), veh/h	175	1878	0	0	1887	715	1389	0				
V/C Ratio(X)	0.85	1.02	0.00	0.00	0.89	0.89	0.96	0.00				
Avail Cap(c_a), veh/h	272	1878	0	0	1887	715	1404	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.62	0.62	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	47.4	0.0	0.0	0.0	34.0	34.1	35.7	0.0	0.0			
Incr Delay (d2), s/veh	9.3	21.4	0.0	0.0	6.5	15.1	15.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	5.6	0.0	0.0	16.0	19.9	21.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	21.4	0.0	0.0	40.6	49.2	51.5	0.0	0.0			
LnGrp LOS	E	F	A	A	D	D	D	A				
Approach Vol, veh/h		2063			2304			1336	A			
Approach Delay, s/veh		24.0			42.9			51.5				
Approach LOS		C			D			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		51.5		68.5			16.5	52.0				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 47		62.9			* 18	39.9				
Max Q Clear Time (g_c+l1), s		45.9		2.0			11.7	40.7				
Green Ext Time (p_c), s		0.9		30.3			0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

EPAP plus Buildout PM
 08/18/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	568	432	116	802	20	244	15	159	21	40	11
Future Volume (veh/h)	4	568	432	116	802	20	244	15	159	21	40	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	617	470	126	872	22	265	16	173	23	43	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	756	641	274	1047	887	286	11	476	67	103	19
Arrive On Green	0.01	0.40	0.40	0.15	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	621	38	1585	0	342	62
Grp Volume(v), veh/h	4	617	470	126	872	22	281	0	173	78	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	659	0	1585	404	0	0
Q Serve(g_s), s	0.2	20.5	17.6	4.5	26.9	0.4	0.0	0.0	6.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	20.5	17.6	4.5	26.9	0.4	21.0	0.0	6.0	21.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.94		1.00	0.29		0.15
Lane Grp Cap(c), veh/h	10	756	641	274	1047	887	298	0	476	188	0	0
V/C Ratio(X)	0.42	0.82	0.73	0.46	0.83	0.02	0.94	0.00	0.36	0.42	0.00	0.00
Avail Cap(c_a), veh/h	127	756	641	274	1047	887	298	0	476	188	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.7	18.5	17.7	27.0	12.7	6.9	27.6	0.0	19.3	19.8	0.0	0.0
Incr Delay (d2), s/veh	26.8	9.5	7.3	0.7	4.5	0.0	37.5	0.0	0.5	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.0	7.1	1.9	10.6	0.1	7.7	0.0	2.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	28.0	24.9	27.6	17.2	6.9	65.1	0.0	19.7	21.3	0.0	0.0
LnGrp LOS	E	C	C	C	B	A	E	A	B	C	A	A
Approach Vol, veh/h		1091			1020			454			78	
Approach Delay, s/veh		26.8			18.3			47.8			21.3	
Approach LOS		C			B			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.6	15.9	33.4		25.6	5.0	44.3				
Change Period (Y+Rc), s		4.6	5.1	* 5.1		4.6	4.6	5.1				
Max Green Setting (Gmax), s		21.0	6.4	* 28		21.0	5.0	29.7				
Max Q Clear Time (g_c+l1), s		23.0	6.5	22.5		23.0	2.2	28.9				
Green Ext Time (p_c), s		0.0	0.0	2.9		0.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay					27.0							
HCM 6th LOS					C							
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	389	335	41	355	7	546	42	70	8	22	68
Future Volume (veh/h)	37	389	335	41	355	7	546	42	70	8	22	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	423	0	45	386	8	593	46	76	9	24	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	478		73	496	421	647	230	380	34	92	108
Arrive On Green	0.04	0.26	0.00	0.04	0.27	0.27	0.36	0.36	0.36	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	634	1048	503	1342	1585
Grp Volume(v), veh/h	40	423	0	45	386	8	593	0	122	33	0	74
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1682	1845	0	1585
Q Serve(g_s), s	1.6	15.7	0.0	1.8	13.8	0.3	22.9	0.0	3.6	1.2	0.0	3.3
Cycle Q Clear(g_c), s	1.6	15.7	0.0	1.8	13.8	0.3	22.9	0.0	3.6	1.2	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	0.27		1.00
Lane Grp Cap(c), veh/h	68	478		73	496	421	647	0	611	126	0	108
V/C Ratio(X)	0.59	0.89		0.61	0.78	0.02	0.92	0.00	0.20	0.26	0.00	0.68
Avail Cap(c_a), veh/h	124	534		124	534	453	724	0	684	538	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	25.8	0.0	34.0	24.5	19.6	21.9	0.0	15.8	31.9	0.0	32.8
Incr Delay (d2), s/veh	7.8	15.1	0.0	8.0	6.7	0.0	15.5	0.0	0.2	1.1	0.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.6	0.0	0.9	6.7	0.1	11.6	0.0	1.3	0.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	40.9	0.0	42.0	31.2	19.6	37.4	0.0	15.9	33.0	0.0	40.2
LnGrp LOS	D	D		D	C	B	D	A	B	C	A	D
Approach Vol, veh/h		463	A		439			715			107	
Approach Delay, s/veh		41.0			32.1			33.8			38.0	
Approach LOS		D			C			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.9	8.1	23.5		9.6	7.4	24.2				
Change Period (Y+Rc), s		* 4.7	5.1	* 5.1		4.7	4.6	5.1				
Max Green Setting (Gmax), s		* 29	5.0	* 21		21.0	5.0	20.6				
Max Q Clear Time (g_c+I1), s		24.9	3.8	17.7		5.3	3.6	15.8				
Green Ext Time (p_c), s		1.3	0.0	0.7		0.3	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	7.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	26	335	112	7	429	143
Future Vol, veh/h	26	335	112	7	429	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	364	122	8	466	155

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1213	126	0	0	130
Stage 1	126	-	-	-	-
Stage 2	1087	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	201	924	-	-	1455
Stage 1	900	-	-	-	-
Stage 2	323	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	130	924	-	-	1455
Mov Cap-2 Maneuver	130	-	-	-	-
Stage 1	900	-	-	-	-
Stage 2	210	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	6.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1455
HCM Lane V/C Ratio	-	-	0.394	0.32
HCM Control Delay (s)	-	-	10.9	8.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.9	1.4

Intersection						
Int Delay, s/veh	39.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	415	50	60	234	205	189
Future Vol, veh/h	415	50	60	234	205	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	25	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	451	54	65	254	223	205

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	607	- 223	0	-	0
Stage 1	223	-	-	-	-
Stage 2	384	-	-	-	-
Critical Hdwy	6.42	- 4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	- 2.218	-	-	-
Pot Cap-1 Maneuver	460	0 1346	-	-	0
Stage 1	814	0	-	-	0
Stage 2	688	0	-	-	0
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	~ 434	- 1346	-	-	-
Mov Cap-2 Maneuver	~ 434	-	-	-	-
Stage 1	768	-	-	-	-
Stage 2	688	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	85.1	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1346	-	434	-	-
HCM Lane V/C Ratio	0.048	-	1.039	-	-
HCM Control Delay (s)	7.8	0	85.1	0	-
HCM Lane LOS	A	A	F	A	-
HCM 95th %tile Q(veh)	0.2	-	14.1	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Queues
1: I-5 Ramps & 8 Mile Road

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2236	657	183	3362	60	60	254
v/c Ratio	0.73	0.59	0.49	1.18	0.26	0.28	0.16
Control Delay	16.5	3.2	44.6	98.9	47.3	47.7	0.2
Queue Delay	0.1	0.0	0.0	0.4	10.6	110.6	0.0
Total Delay	16.5	3.2	44.6	99.2	57.9	158.3	0.2
Queue Length 50th (ft)	447	0	70	~1728	43	43	0
Queue Length 95th (ft)	516	52	m70	m#1726	87	87	0
Internal Link Dist (ft)	242			160		206	
Turn Bay Length (ft)							
Base Capacity (vph)	3050	1114	374	2852	270	216	1583
Starvation Cap Reductn	0	0	0	488	0	0	0
Spillback Cap Reductn	75	0	0	0	180	180	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.59	0.49	1.42	0.67	1.67	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: I-5 Ramps & 8 Mile Road












Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	149	1914	2304	668	668	724
v/c Ratio	0.69	1.03	1.00	1.01	1.01	0.46
Control Delay	78.3	46.1	56.5	74.0	74.0	1.0
Queue Delay	2.4	1.2	0.0	32.1	32.1	0.0
Total Delay	80.8	47.3	56.5	106.1	106.1	1.0
Queue Length 50th (ft)	115	~841	~524	~548	~548	0
Queue Length 95th (ft)	m156	#961	#657	#813	#813	0
Internal Link Dist (ft)		160	272		743	
Turn Bay Length (ft)						
Base Capacity (vph)	269	1855	2312	662	662	1583
Starvation Cap Reductn	48	6	0	0	0	0
Spillback Cap Reductn	0	0	0	75	75	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.04	1.00	1.14	1.14	0.46

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	4	617	470	126	872	22	281	173	78
v/c Ratio	0.03	0.75	0.49	0.78	0.82	0.02	0.77	0.31	0.18
Control Delay	30.8	25.0	3.5	65.3	23.4	0.1	38.6	4.6	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	25.0	3.5	65.3	23.4	0.1	38.6	4.6	17.4
Queue Length 50th (ft)	2	224	0	54	273	0	107	0	21
Queue Length 95th (ft)	10	#406	51	#139	#645	0	#204	36	50
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	134	822	961	161	1064	945	416	603	483
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.75	0.49	0.78	0.82	0.02	0.68	0.29	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	40	423	364	45	386	8	593	122	33	74
v/c Ratio	0.34	0.82	0.52	0.38	0.74	0.02	0.85	0.17	0.20	0.23
Control Delay	44.6	42.7	6.0	46.1	37.7	0.0	36.9	8.9	36.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	42.7	6.0	46.1	37.7	0.0	36.9	8.9	36.8	1.7
Queue Length 50th (ft)	20	206	0	22	183	0	282	15	16	0
Queue Length 95th (ft)	52	#383	65	56	#337	0	#501	51	43	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200	250			
Base Capacity (vph)	119	519	703	119	519	532	701	715	522	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.82	0.52	0.38	0.74	0.02	0.85	0.17	0.06	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.























HCM 6th Signalized Intersection Summary
 1: SB I-5 Ramps & 8 Mile Rd

Cumulative AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	420	882	914	883	0	0	0	0	91	0	110
Future Volume (veh/h)	0	420	882	914	883	0	0	0	0	91	0	110
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	457	959	993	960	0				99	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1986	1683	856	4255	0				188	0	
Arrive On Green	0.00	0.53	0.53	0.41	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	457	959	993	960	0				99	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	5.6	17.5	21.3	0.0	0.0				2.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.6	17.5	21.3	0.0	0.0				2.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1986	1683	856	4255	0				188	0	
V/C Ratio(X)	0.00	0.23	0.57	1.16	0.23	0.00				0.53	0.00	
Avail Cap(c_a), veh/h	0	1986	1683	856	4255	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.66	0.66	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	10.8	13.6	25.2	0.0	0.0				39.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	1.4	81.0	0.1	0.0				2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	5.3	15.4	0.0	0.0				1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.0	15.0	106.2	0.1	0.0				42.0	0.0	0.0
LnGrp LOS	A	B	B	F	A	A				D	A	
Approach Vol, veh/h		1416			1953						99	A
Approach Delay, s/veh		13.7			54.1						42.0	
Approach LOS		B			D						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			26.0	50.8		9.2		76.8				
Change Period (Y+Rc), s			* 4.7	5.1		4.7		5.1				
Max Green Setting (Gmax), s			* 21	32.2		18.0		58.2				
Max Q Clear Time (g_c+I1), s			23.3	19.5		4.3		2.0				
Green Ext Time (p_c), s			0.0	5.6		0.2		6.9				
Intersection Summary												
HCM 6th Ctrl Delay			37.2									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												













HCM 6th Signalized Intersection Summary
2: NB I-5 Ramps & 8 Mile Rd

Cumulative AM
08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	125	392	0	0	1259	172	547	2	446	0	0	0
Future Volume (veh/h)	125	392	0	0	1259	172	547	2	446	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	136	426	0	0	1368	187	596	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	509	3477	0	0	1938	264	731	0				
Arrive On Green	0.57	1.00	0.00	0.00	0.34	0.34	0.21	0.00	0.00			
Sat Flow, veh/h	1781	5274	0	0	6030	786	3563	0	1585			
Grp Volume(v), veh/h	136	426	0	0	1144	411	596	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1609	1729	1781	0	1585			
Q Serve(g_s), s	3.3	0.0	0.0	0.0	17.7	17.8	13.7	0.0	0.0			
Cycle Q Clear(g_c), s	3.3	0.0	0.0	0.0	17.7	17.8	13.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.45	1.00		1.00			
Lane Grp Cap(c), veh/h	509	3477	0	0	1622	581	731	0				
V/C Ratio(X)	0.27	0.12	0.00	0.00	0.71	0.71	0.82	0.00				
Avail Cap(c_a), veh/h	509	3477	0	0	1622	581	1214	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.9	0.0	0.0	0.0	24.8	24.9	32.6	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.6	7.1	2.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.0	6.3	7.5	5.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.1	0.0	0.0	27.5	32.0	34.9	0.0	0.0			
LnGrp LOS	B	A	A	A	C	C	C	A				
Approach Vol, veh/h		562			1555			596	A			
Approach Delay, s/veh		3.5			28.7			34.9				
Approach LOS		A			C			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.3		63.7			29.7	34.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 29		46.9			13.3	* 29				
Max Q Clear Time (g_c+l1), s		15.7		2.0			5.3	19.8				
Green Ext Time (p_c), s		1.9		2.6			0.2	5.7				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												




















HCM 6th Signalized Intersection Summary
 25: SR 99 SB Ramps & 8 Mile Road

Cumulative AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑	↑↑						↑	↑↑
Traffic Volume (veh/h)	0	680	535	110	763	0	0	0	0	55	0	290
Future Volume (veh/h)	0	680	535	110	763	0	0	0	0	55	0	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	739	582	120	829	0				60	0	315
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3071	953	152	2632	0				255	0	399
Arrive On Green	0.00	0.60	0.60	0.09	0.74	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	5274	1585	1781	3647	0				1781	0	2790
Grp Volume(v), veh/h	0	739	582	120	829	0				60	0	315
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1781	1777	0				1781	0	1395
Q Serve(g_s), s	0.0	5.8	19.9	5.7	6.8	0.0				2.6	0.0	9.4
Cycle Q Clear(g_c), s	0.0	5.8	19.9	5.7	6.8	0.0				2.6	0.0	9.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3071	953	152	2632	0				255	0	399
V/C Ratio(X)	0.00	0.24	0.61	0.79	0.32	0.00				0.24	0.00	0.79
Avail Cap(c_a), veh/h	0	3071	953	278	2632	0				387	0	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.97	0.97	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.0	10.8	38.6	3.8	0.0				32.7	0.0	35.6
Incr Delay (d2), s/veh	0.0	0.2	2.8	8.1	0.3	0.0				0.5	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	6.2	2.7	1.5	0.0				1.1	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.2	13.6	46.7	4.1	0.0				33.1	0.0	39.6
LnGrp LOS	A	A	B	D	A	A				C	A	D
Approach Vol, veh/h		1321			949						375	
Approach Delay, s/veh		10.6			9.5						38.5	
Approach LOS		B			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			12.0	57.1		16.9		69.1				
Change Period (Y+Rc), s			4.6	5.4		4.6		5.4				
Max Green Setting (Gmax), s			13.4	39.3		18.7		57.3				
Max Q Clear Time (g_c+I1), s			7.7	21.9		11.4		8.8				
Green Ext Time (p_c), s			0.1	6.6		0.9		6.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.1									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 26: SR 99 NB Ramps & 8 Mile Road

Cumulative AM
 08/19/2020

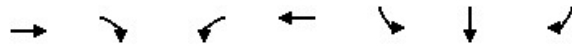
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	175	0	0	340	23	314	0	19	0	0	0
Future Volume (veh/h)	425	175	0	0	340	23	314	0	19	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	462	190	0	0	370	25	341	0	21			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1447	2686	0	0	975	435	455	0	203			
Arrive On Green	0.14	0.25	0.00	0.00	0.27	0.27	0.13	0.00	0.13			
Sat Flow, veh/h	3456	3647	0	0	3647	1585	3563	0	1585			
Grp Volume(v), veh/h	462	190	0	0	370	25	341	0	21			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	1781	0	1585			
Q Serve(g_s), s	10.4	3.5	0.0	0.0	7.3	1.0	7.9	0.0	1.0			
Cycle Q Clear(g_c), s	10.4	3.5	0.0	0.0	7.3	1.0	7.9	0.0	1.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1447	2686	0	0	975	435	455	0	203			
V/C Ratio(X)	0.32	0.07	0.00	0.00	0.38	0.06	0.75	0.00	0.10			
Avail Cap(c_a), veh/h	1447	2686	0	0	975	435	969	0	431			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	0.96	0.96	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.0	9.2	0.0	0.0	25.3	23.0	36.2	0.0	33.2			
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	1.1	0.2	2.5	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	0.8	0.0	0.0	3.0	0.4	3.5	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	9.2	0.0	0.0	26.3	23.2	38.7	0.0	33.4			
LnGrp LOS	C	A	A	A	C	C	D	A	C			
Approach Vol, veh/h		652			395			362				
Approach Delay, s/veh		21.2			26.2			38.4				
Approach LOS		C			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		15.6		70.4			41.4	29.0				
Change Period (Y+Rc), s		4.6		5.4			5.4	* 5.4				
Max Green Setting (Gmax), s		23.4		52.6			24.4	* 24				
Max Q Clear Time (g_c+I1), s		9.9		5.5			12.4	9.3				
Green Ext Time (p_c), s		1.1		1.2			1.3	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				27.0								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Queues

Cumulative AM

1: SB I-5 Ramps & 8 Mile Rd

08/19/2020



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	937	479	993	960	49	50	120
v/c Ratio	0.48	0.58	0.87	0.23	0.19	0.24	0.08
Control Delay	12.7	5.1	28.0	3.4	30.8	31.0	0.1
Queue Delay	0.0	0.0	1.8	0.2	0.0	0.0	0.0
Total Delay	12.7	5.1	29.8	3.6	30.8	31.0	0.1
Queue Length 50th (ft)	87	0	~340	34	23	23	0
Queue Length 95th (ft)	127	74	#435	53	54	54	0
Internal Link Dist (ft)	1867			161		261	
Turn Bay Length (ft)							
Base Capacity (vph)	1961	826	1145	4099	351	211	1583
Starvation Cap Reductn	0	0	60	2067	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.58	0.92	0.47	0.14	0.24	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues
2: NB I-5 Ramps & 8 Mile Rd

Cumulative AM
08/19/2020



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	136	426	1555	297	300	485
v/c Ratio	0.50	0.15	0.73	0.52	0.52	0.61
Control Delay	32.4	8.9	26.7	26.7	26.7	8.3
Queue Delay	0.4	0.0	1.0	0.0	0.0	0.0
Total Delay	32.8	8.9	27.7	26.7	26.7	8.3
Queue Length 50th (ft)	44	38	206	133	134	32
Queue Length 95th (ft)	79	50	249	215	217	120
Internal Link Dist (ft)		161	3355		754	
Turn Bay Length (ft)						
Base Capacity (vph)	273	2773	2143	572	574	801
Starvation Cap Reductn	15	0	0	0	0	0
Spillback Cap Reductn	0	0	316	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.15	0.85	0.52	0.52	0.61

Intersection Summary

Queues
25: SR 99 SB Ramps & 8 Mile Road

Cumulative AM
08/19/2020



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	739	582	120	829	60	315
v/c Ratio	0.27	0.52	0.55	0.34	no cap	0.41
Control Delay	12.7	3.2	56.5	2.8		5.2
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	12.7	3.2	56.5	2.8	Error	5.2
Queue Length 50th (ft)	84	0	69	32	~68	0
Queue Length 95th (ft)	117	55	123	40	#146	35
Internal Link Dist (ft)	928			642	1579	
Turn Bay Length (ft)			300			500
Base Capacity (vph)	2774	1128	275	2466	1	852
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.52	0.44	0.34	60.00	0.37

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
26: SR 99 NB Ramps & 8 Mile Road

Cumulative AM
08/19/2020















Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	462	190	370	25	170	171	21
v/c Ratio	0.47	0.09	0.38	0.05	0.37	0.37	0.04
Control Delay	30.8	3.1	26.7	0.2	28.2	28.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	3.1	26.7	0.2	28.2	28.3	0.2
Queue Length 50th (ft)	140	12	85	0	77	78	0
Queue Length 95th (ft)	174	2	125	0	137	137	0
Internal Link Dist (ft)		642	402			1010	
Turn Bay Length (ft)	300			125	400		400
Base Capacity (vph)	974	2164	971	498	457	457	502
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.09	0.38	0.05	0.37	0.37	0.04

Intersection Summary

HCM 6th Signalized Intersection Summary
 1: SB I-5 Ramps & 8 Mile Rd

Cumulative PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	601	793	488	1320	0	0	0	0	226	4	207
Future Volume (veh/h)	0	601	793	488	1320	0	0	0	0	226	4	207
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	653	862	530	1435	0				249	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1575	1335	1163	4128	0				333	0	
Arrive On Green	0.00	0.42	0.42	0.67	1.00	0.00				0.09	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	653	862	530	1435	0				249	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	12.2	21.6	7.2	0.0	0.0				6.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.2	21.6	7.2	0.0	0.0				6.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1575	1335	1163	4128	0				333	0	
V/C Ratio(X)	0.00	0.41	0.65	0.46	0.35	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1575	1335	1163	4128	0				645	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	0.56	0.56	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.3	23.0	12.0	0.0	0.0				44.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	2.4	0.2	0.1	0.0				3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	7.6	2.1	0.0	0.0				3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.1	25.4	12.2	0.1	0.0				47.5	0.0	0.0
LnGrp LOS	A	C	C	B	A	A				D	A	
Approach Vol, veh/h		1515			1965						249	A
Approach Delay, s/veh		23.6			3.4						47.5	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			38.7	47.2		14.1		85.9				
Change Period (Y+Rc), s			5.1	* 5.1		4.7		5.1				
Max Green Setting (Gmax), s			25.3	* 42		18.1		72.1				
Max Q Clear Time (g_c+l1), s			9.2	23.6		8.8		2.0				
Green Ext Time (p_c), s			1.6	7.4		0.6		12.9				
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												













HCM 6th Signalized Intersection Summary
 2: NB I-5 Ramps & 8 Mile Rd

Cumulative PM
 08/19/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	710	0	0	898	91	956	0	917	0	0	0
Future Volume (veh/h)	153	710	0	0	898	91	956	0	917	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	166	772	0	0	976	99	1039	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	176	2884	0	0	2508	252	1201	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.42	0.42	0.34	0.00	0.00			
Sat Flow, veh/h	1781	5274	0	0	6248	602	3563	0	1585			
Grp Volume(v), veh/h	166	772	0	0	785	290	1039	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1609	1762	1781	0	1585			
Q Serve(g_s), s	9.2	0.0	0.0	0.0	11.3	11.4	27.3	0.0	0.0			
Cycle Q Clear(g_c), s	9.2	0.0	0.0	0.0	11.3	11.4	27.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.34	1.00		1.00			
Lane Grp Cap(c), veh/h	176	2884	0	0	2021	738	1201	0				
V/C Ratio(X)	0.94	0.27	0.00	0.00	0.39	0.39	0.87	0.00				
Avail Cap(c_a), veh/h	176	2884	0	0	2021	738	2006	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.84	0.84	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	39.8	0.0	0.0	0.0	20.2	20.2	31.0	0.0	0.0			
Incr Delay (d2), s/veh	45.7	0.2	0.0	0.0	0.6	1.6	2.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.6	0.1	0.0	0.0	3.9	4.5	11.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.5	0.2	0.0	0.0	20.7	21.8	33.3	0.0	0.0			
LnGrp LOS	F	A	A	A	C	C	C	A				
Approach Vol, veh/h		938			1075			1039	A			
Approach Delay, s/veh		15.3			21.0			33.3				
Approach LOS		B			C			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		61.6			14.6	47.0				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 56		33.9			* 9.9	19.3				
Max Q Clear Time (g_c+l1), s		29.3		2.0			11.2	13.4				
Green Ext Time (p_c), s		4.4		5.0			0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay				23.4								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												




















HCM 6th Signalized Intersection Summary
 25: SR 99 SB Ramps & 8 Mile Road

Cumulative PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑	↑↑						↑	↑↑
Traffic Volume (veh/h)	0	795	360	49	988	0	0	0	0	48	0	358
Future Volume (veh/h)	0	795	360	49	988	0	0	0	0	48	0	358
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	864	391	53	1074	0				52	0	389
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3302	1025	69	2598	0				301	0	471
Arrive On Green	0.00	1.00	1.00	0.08	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	5274	1585	1781	3647	0				1781	0	2790
Grp Volume(v), veh/h	0	864	391	53	1074	0				52	0	389
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1781	1777	0				1781	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0				2.5	0.0	13.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.9	0.0	0.0				2.5	0.0	13.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3302	1025	69	2598	0				301	0	471
V/C Ratio(X)	0.00	0.26	0.38	0.77	0.41	0.00				0.17	0.00	0.83
Avail Cap(c_a), veh/h	0	3302	1025	203	2598	0				470	0	736
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.97	0.97	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	45.7	0.0	0.0				35.6	0.0	40.1
Incr Delay (d2), s/veh	0.0	0.2	1.0	15.5	0.5	0.0				0.3	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	1.5	0.2	0.0				1.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	1.0	61.2	0.5	0.0				35.9	0.0	44.6
LnGrp LOS	A	A	A	E	A	A				D	A	D
Approach Vol, veh/h		1255			1127						441	
Approach Delay, s/veh		0.5			3.3						43.6	
Approach LOS		A			A						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			8.5	70.1		21.5			78.5			
Change Period (Y+Rc), s			4.6	5.4		4.6			5.4			
Max Green Setting (Gmax), s			11.4	47.6		26.4			63.6			
Max Q Clear Time (g_c+I1), s			4.9	2.0		15.5			2.0			
Green Ext Time (p_c), s			0.0	8.5		1.4			9.1			
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary
 26: SR 99 NB Ramps & 8 Mile Road

Cumulative PM
 08/19/2020

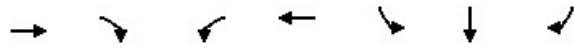
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	353	0	0	275	6	531	0	14	0	0	0
Future Volume (veh/h)	287	353	0	0	275	6	531	0	14	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	312	384	0	0	299	7	577	0	15			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1360	2500	0	0	910	406	700	0	311			
Arrive On Green	0.13	0.23	0.00	0.00	0.17	0.17	0.20	0.00	0.20			
Sat Flow, veh/h	3456	3647	0	0	3647	1585	3563	0	1585			
Grp Volume(v), veh/h	312	384	0	0	299	7	577	0	15			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	1781	0	1585			
Q Serve(g_s), s	8.1	8.6	0.0	0.0	7.4	0.4	15.5	0.0	0.8			
Cycle Q Clear(g_c), s	8.1	8.6	0.0	0.0	7.4	0.4	15.5	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1360	2500	0	0	910	406	700	0	311			
V/C Ratio(X)	0.23	0.15	0.00	0.00	0.33	0.02	0.82	0.00	0.05			
Avail Cap(c_a), veh/h	1360	2500	0	0	910	406	1368	0	609			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.9	14.7	0.0	0.0	33.9	31.0	38.5	0.0	32.6			
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.0	0.9	0.1	2.5	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.4	3.3	0.0	0.0	3.3	0.1	6.9	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	14.8	0.0	0.0	34.8	31.0	41.0	0.0	32.7			
LnGrp LOS	C	B	A	A	C	C	D	A	C			
Approach Vol, veh/h		696			306			592				
Approach Delay, s/veh		21.6			34.7			40.8				
Approach LOS		C			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		24.2		75.8			44.8	31.0				
Change Period (Y+Rc), s		4.6		5.4			5.4	* 5.4				
Max Green Setting (Gmax), s		38.4		51.6			21.4	* 26				
Max Q Clear Time (g_c+I1), s		17.5		10.6			10.1	9.4				
Green Ext Time (p_c), s		2.1		2.4			0.8	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				31.3								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Queues

Cumulative PM

1: SB I-5 Ramps & 8 Mile Rd

08/19/2020



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1084	431	530	1435	125	125	225
v/c Ratio	0.54	0.52	0.61	0.39	0.41	0.41	0.14
Control Delay	18.3	4.4	26.0	2.7	41.0	40.9	0.2
Queue Delay	0.0	0.0	14.6	0.5	0.0	0.0	0.0
Total Delay	18.3	4.4	40.5	3.1	41.0	40.9	0.2
Queue Length 50th (ft)	156	0	150	49	74	74	0
Queue Length 95th (ft)	201	66	m184	64	134	134	0
Internal Link Dist (ft)	1867			161		261	
Turn Bay Length (ft)							
Base Capacity (vph)	2021	822	868	3666	304	305	1583
Starvation Cap Reductn	0	0	323	1569	0	0	0
Spillback Cap Reductn	14	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.52	0.97	0.68	0.41	0.41	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: NB I-5 Ramps & 8 Mile Rd

Cumulative PM
08/19/2020



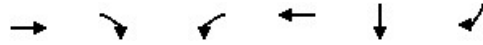
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	166	772	1075	519	520	997
v/c Ratio	0.95	0.45	0.87	0.55	0.55	1.08
Control Delay	96.1	14.5	47.2	16.6	16.6	75.7
Queue Delay	0.0	0.8	0.2	0.2	0.2	0.0
Total Delay	96.1	15.2	47.4	16.7	16.8	75.7
Queue Length 50th (ft)	87	85	191	207	207	~694
Queue Length 95th (ft)	#227	102	#238	307	307	#940
Internal Link Dist (ft)		161	3355		754	
Turn Bay Length (ft)						
Base Capacity (vph)	175	1723	1236	946	946	923
Starvation Cap Reductn	0	590	0	0	0	0
Spillback Cap Reductn	0	0	8	58	58	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.68	0.88	0.58	0.59	1.08

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
25: SR 99 SB Ramps & 8 Mile Road

Cumulative PM
08/19/2020



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	864	391	53	1074	52	389
v/c Ratio	0.30	0.37	0.36	0.45	no cap	0.50
Control Delay	9.4	2.4	42.6	5.8		16.6
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	9.4	2.4	42.6	5.8	Error	16.6
Queue Length 50th (ft)	115	47	26	199	~69	52
Queue Length 95th (ft)	71	4	55	245	#148	99
Internal Link Dist (ft)	928			642	1579	
Turn Bay Length (ft)			300			500
Base Capacity (vph)	2877	1065	201	2390	1	887
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.37	0.26	0.45	52.00	0.44

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
26: SR 99 NB Ramps & 8 Mile Road

Cumulative PM
08/19/2020















Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	312	384	299	7	288	289	15
v/c Ratio	0.43	0.21	0.33	0.02	0.45	0.45	0.02
Control Delay	23.6	2.0	18.6	0.0	25.7	25.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	2.0	18.6	0.0	25.7	25.7	0.1
Queue Length 50th (ft)	91	3	84	0	141	142	0
Queue Length 95th (ft)	126	4	68	m0	220	221	0
Internal Link Dist (ft)		642	402			1010	
Turn Bay Length (ft)	300			125	400		400
Base Capacity (vph)	734	1826	905	461	645	645	660
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.21	0.33	0.02	0.45	0.45	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.























HCM 6th Signalized Intersection Summary
 1: SB I-5 Ramps & 8 Mile Rd

Cumulative plus Project AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	423	882	914	884	0	0	0	0	97	0	110
Future Volume (veh/h)	0	423	882	914	884	0	0	0	0	97	0	110
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	460	959	993	961	0				105	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1984	1681	856	4252	0				190	0	
Arrive On Green	0.00	0.53	0.53	0.41	1.00	0.00				0.05	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	460	959	993	961	0				105	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	5.7	17.5	21.3	0.0	0.0				2.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.7	17.5	21.3	0.0	0.0				2.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1984	1681	856	4252	0				190	0	
V/C Ratio(X)	0.00	0.23	0.57	1.16	0.23	0.00				0.55	0.00	
Avail Cap(c_a), veh/h	0	1984	1681	856	4252	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.66	0.66	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	10.8	13.6	25.2	0.0	0.0				39.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	1.4	81.0	0.1	0.0				2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	5.3	15.4	0.0	0.0				1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.1	15.0	106.2	0.1	0.0				42.2	0.0	0.0
LnGrp LOS	A	B	B	F	A	A				D	A	
Approach Vol, veh/h		1419			1954						105	A
Approach Delay, s/veh		13.7			54.0						42.2	
Approach LOS		B			D						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			26.0	50.7		9.3		76.7				
Change Period (Y+Rc), s			* 4.7	5.1		4.7		5.1				
Max Green Setting (Gmax), s			* 21	32.2		18.0		58.2				
Max Q Clear Time (g_c+I1), s			23.3	19.5		4.5		2.0				
Green Ext Time (p_c), s			0.0	5.6		0.2		6.9				
Intersection Summary												
HCM 6th Ctrl Delay			37.2									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												













HCM 6th Signalized Intersection Summary
2: NB I-5 Ramps & 8 Mile Rd

Cumulative plus Project AM
08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	125	400	0	0	1260	174	547	2	446	0	0	0
Future Volume (veh/h)	125	400	0	0	1260	174	547	2	446	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	136	435	0	0	1370	189	596	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	509	3477	0	0	1936	266	731	0				
Arrive On Green	0.57	1.00	0.00	0.00	0.34	0.34	0.21	0.00	0.00			
Sat Flow, veh/h	1781	5274	0	0	6022	793	3563	0	1585			
Grp Volume(v), veh/h	136	435	0	0	1147	412	596	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1609	1728	1781	0	1585			
Q Serve(g_s), s	3.3	0.0	0.0	0.0	17.8	17.9	13.7	0.0	0.0			
Cycle Q Clear(g_c), s	3.3	0.0	0.0	0.0	17.8	17.9	13.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.46	1.00		1.00			
Lane Grp Cap(c), veh/h	509	3477	0	0	1622	581	731	0				
V/C Ratio(X)	0.27	0.13	0.00	0.00	0.71	0.71	0.82	0.00				
Avail Cap(c_a), veh/h	509	3477	0	0	1622	581	1214	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.9	0.0	0.0	0.0	24.9	24.9	32.6	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	2.6	7.2	2.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.0	6.3	7.6	5.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.1	0.0	0.0	27.5	32.1	34.9	0.0	0.0			
LnGrp LOS	B	A	A	A	C	C	C	A				
Approach Vol, veh/h		571			1559			596	A			
Approach Delay, s/veh		3.4			28.7			34.9				
Approach LOS		A			C			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.3		63.7			29.7	34.0				
Change Period (Y+Rc), s		* 4.7		5.1			5.1	* 5.1				
Max Green Setting (Gmax), s		* 29		46.9			13.3	* 29				
Max Q Clear Time (g_c+I1), s		15.7		2.0			5.3	19.9				
Green Ext Time (p_c), s		1.9		2.7			0.2	5.7				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												




















HCM 6th Signalized Intersection Summary
 25: SR 99 SB Ramps & 8 Mile Road

Cumulative plus Project AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	684	557	110	828	0	0	0	0	55	0	297
Future Volume (veh/h)	0	684	557	110	828	0	0	0	0	55	0	297
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	743	605	120	900	0				60	0	323
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3055	948	153	2622	0				260	0	407
Arrive On Green	0.00	0.60	0.60	0.06	0.49	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	5274	1585	1781	3647	0				1781	0	2790
Grp Volume(v), veh/h	0	743	605	120	900	0				60	0	323
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1781	1777	0				1781	0	1395
Q Serve(g_s), s	0.0	5.9	21.3	5.7	13.3	0.0				2.6	0.0	9.6
Cycle Q Clear(g_c), s	0.0	5.9	21.3	5.7	13.3	0.0				2.6	0.0	9.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3055	948	153	2622	0				260	0	407
V/C Ratio(X)	0.00	0.24	0.64	0.78	0.34	0.00				0.23	0.00	0.79
Avail Cap(c_a), veh/h	0	3055	948	278	2622	0				387	0	607
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.97	0.97	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	11.2	39.7	9.1	0.0				32.5	0.0	35.5
Incr Delay (d2), s/veh	0.0	0.2	3.2	7.9	0.3	0.0				0.4	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	6.8	2.8	4.7	0.0				1.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.3	14.4	47.6	9.4	0.0				32.9	0.0	39.8
LnGrp LOS	A	A	B	D	A	A				C	A	D
Approach Vol, veh/h		1348			1020						383	
Approach Delay, s/veh		11.0			13.9						38.7	
Approach LOS		B			B						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			12.0	56.9		17.2			68.8			
Change Period (Y+Rc), s			4.6	5.4		4.6			5.4			
Max Green Setting (Gmax), s			13.4	39.3		18.7			57.3			
Max Q Clear Time (g_c+I1), s			7.7	23.3		11.6			15.3			
Green Ext Time (p_c), s			0.1	6.5		0.9			6.8			
Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									








HCM 6th Signalized Intersection Summary
 26: SR 99 NB Ramps & 8 Mile Road

Cumulative plus Project AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	427	176	0	0	343	23	376	0	19	0	0	0
Future Volume (veh/h)	427	176	0	0	343	23	376	0	19	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	464	191	0	0	373	25	409	0	21			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1377	2615	0	0	975	435	527	0	235			
Arrive On Green	0.13	0.24	0.00	0.00	0.27	0.27	0.15	0.00	0.15			
Sat Flow, veh/h	3456	3647	0	0	3647	1585	3563	0	1585			
Grp Volume(v), veh/h	464	191	0	0	373	25	409	0	21			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	1781	0	1585			
Q Serve(g_s), s	10.5	3.6	0.0	0.0	7.3	1.0	9.5	0.0	1.0			
Cycle Q Clear(g_c), s	10.5	3.6	0.0	0.0	7.3	1.0	9.5	0.0	1.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1377	2615	0	0	975	435	527	0	235			
V/C Ratio(X)	0.34	0.07	0.00	0.00	0.38	0.06	0.78	0.00	0.09			
Avail Cap(c_a), veh/h	1377	2615	0	0	975	435	969	0	431			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	0.96	0.96	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	10.0	0.0	0.0	25.3	23.0	35.3	0.0	31.6			
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.0	1.1	0.2	2.5	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	0.9	0.0	0.0	3.0	0.4	4.2	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	10.0	0.0	0.0	26.4	23.2	37.8	0.0	31.8			
LnGrp LOS	C	B	A	A	C	C	D	A	C			
Approach Vol, veh/h		655			398			430				
Approach Delay, s/veh		22.2			26.2			37.5				
Approach LOS		C			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		17.3		68.7			39.7	29.0				
Change Period (Y+Rc), s		4.6		5.4			5.4	* 5.4				
Max Green Setting (Gmax), s		23.4		52.6			24.4	* 24				
Max Q Clear Time (g_c+I1), s		11.5		5.6			12.5	9.3				
Green Ext Time (p_c), s		1.2		1.2			1.3	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				27.7								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Queues

1: SB I-5 Ramps & 8 Mile Rd

							
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	940	479	993	961	52	53	120
v/c Ratio	0.48	0.58	0.87	0.23	0.20	0.25	0.08
Control Delay	12.8	5.1	28.0	3.4	31.0	31.2	0.1
Queue Delay	0.0	0.0	1.9	0.2	0.0	0.0	0.0
Total Delay	12.8	5.1	29.9	3.6	31.0	31.2	0.1
Queue Length 50th (ft)	89	0	~340	34	24	25	0
Queue Length 95th (ft)	129	74	#435	53	56	56	0
Internal Link Dist (ft)	1867			161		261	
Turn Bay Length (ft)							
Base Capacity (vph)	1959	826	1145	4099	351	211	1583
Starvation Cap Reductn	0	0	61	2068	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.58	0.92	0.47	0.15	0.25	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.







Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues
2: NB I-5 Ramps & 8 Mile Rd

Cumulative plus Project AM
08/19/2020

						
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	136	435	1559	297	300	485
v/c Ratio	0.50	0.16	0.73	0.52	0.52	0.61
Control Delay	32.5	9.0	26.7	26.7	26.7	8.8
Queue Delay	0.4	0.0	1.0	0.0	0.0	0.0
Total Delay	32.8	9.0	27.8	26.7	26.7	8.8
Queue Length 50th (ft)	44	39	207	133	134	36
Queue Length 95th (ft)	78	52	249	215	217	127
Internal Link Dist (ft)		161	3355		754	
Turn Bay Length (ft)						
Base Capacity (vph)	273	2773	2143	572	574	795
Starvation Cap Reductn	15	0	0	0	0	0
Spillback Cap Reductn	0	0	316	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.16	0.85	0.52	0.52	0.61
Intersection Summary						

Queues
25: SR 99 SB Ramps & 8 Mile Road

Cumulative plus Project AM
08/19/2020










Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	743	605	120	900	60	323
v/c Ratio	0.27	0.53	0.55	0.36	no cap	0.41
Control Delay	12.7	3.2	57.2	2.7		5.2
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	12.7	3.2	57.2	2.7	Error	5.2
Queue Length 50th (ft)	84	0	70	33	~68	0
Queue Length 95th (ft)	117	56	125	40	#146	35
Internal Link Dist (ft)	928			642	1579	
Turn Bay Length (ft)			300			500
Base Capacity (vph)	2774	1138	275	2466	1	858
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.53	0.44	0.36	60.00	0.38

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.













Queues
26: SR 99 NB Ramps & 8 Mile Road

Cumulative plus Project AM
08/19/2020

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	464	191	373	25	204	205	21
v/c Ratio	0.48	0.09	0.38	0.05	0.45	0.45	0.04
Control Delay	30.8	3.1	26.7	0.2	29.7	29.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	3.1	26.7	0.2	29.7	29.7	0.2
Queue Length 50th (ft)	140	12	85	0	95	96	0
Queue Length 95th (ft)	175	2	125	0	163	164	0
Internal Link Dist (ft)		642	402			1010	
Turn Bay Length (ft)	300			125	400		400
Base Capacity (vph)	974	2164	971	498	457	457	502
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.09	0.38	0.05	0.45	0.45	0.04
Intersection Summary							























HCM 6th Signalized Intersection Summary
 1: SB I-5 Ramps & 8 Mile Rd

Cumulative plus Project PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	602	793	488	1323	0	0	0	0	229	4	207
Future Volume (veh/h)	0	602	793	488	1323	0	0	0	0	229	4	207
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	654	862	530	1438	0				252	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1575	1335	1160	4123	0				336	0	
Arrive On Green	0.00	0.42	0.42	0.67	1.00	0.00				0.09	0.00	0.00
Sat Flow, veh/h	0	3741	3170	3456	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	654	862	530	1438	0				252	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	12.3	21.6	7.3	0.0	0.0				6.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	21.6	7.3	0.0	0.0				6.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1575	1335	1160	4123	0				336	0	
V/C Ratio(X)	0.00	0.42	0.65	0.46	0.35	0.00				0.75	0.00	
Avail Cap(c_a), veh/h	0	1575	1335	1160	4123	0				645	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.55	0.55	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.3	23.0	12.1	0.0	0.0				44.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	2.4	0.2	0.1	0.0				3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	7.6	2.1	0.0	0.0				3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.1	25.4	12.3	0.1	0.0				47.5	0.0	0.0
LnGrp LOS	A	C	C	B	A	A				D	A	
Approach Vol, veh/h		1516			1968						252	A
Approach Delay, s/veh		23.6			3.4						47.5	
Approach LOS		C			A						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			38.7	47.2		14.1			85.9			
Change Period (Y+Rc), s			5.1	* 5.1		4.7			5.1			
Max Green Setting (Gmax), s			25.3	* 42		18.1			72.1			
Max Q Clear Time (g_c+I1), s			9.3	23.6		8.9			2.0			
Green Ext Time (p_c), s			1.6	7.4		0.6			12.9			
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												













HCM 6th Signalized Intersection Summary
 2: NB I-5 Ramps & 8 Mile Rd

Cumulative plus Project PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	153	714	0	0	901	97	956	0	917	0	0	0
Future Volume (veh/h)	153	714	0	0	901	97	956	0	917	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	166	776	0	0	979	105	1039	0	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	176	2884	0	0	2493	265	1201	0				
Arrive On Green	0.20	1.00	0.00	0.00	0.42	0.42	0.34	0.00	0.00			
Sat Flow, veh/h	1781	5274	0	0	6212	632	3563	0	1585			
Grp Volume(v), veh/h	166	776	0	0	792	292	1039	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1609	1757	1781	0	1585			
Q Serve(g_s), s	9.2	0.0	0.0	0.0	11.4	11.6	27.3	0.0	0.0			
Cycle Q Clear(g_c), s	9.2	0.0	0.0	0.0	11.4	11.6	27.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.36	1.00		1.00			
Lane Grp Cap(c), veh/h	176	2884	0	0	2021	736	1201	0				
V/C Ratio(X)	0.94	0.27	0.00	0.00	0.39	0.40	0.87	0.00				
Avail Cap(c_a), veh/h	176	2884	0	0	2021	736	2006	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	39.8	0.0	0.0	0.0	20.2	20.2	31.0	0.0	0.0			
Incr Delay (d2), s/veh	45.7	0.2	0.0	0.0	0.6	1.6	2.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.6	0.1	0.0	0.0	3.9	4.6	11.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.5	0.2	0.0	0.0	20.8	21.8	33.3	0.0	0.0			
LnGrp LOS	F	A	A	A	C	C	C	A				
Approach Vol, veh/h		942			1084			1039	A			
Approach Delay, s/veh		15.2			21.1			33.3				
Approach LOS		B			C			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		61.6			14.6	47.0				
Change Period (Y+Rc), s		* 4.7		5.1			* 4.7	5.1				
Max Green Setting (Gmax), s		* 56		33.9			* 9.9	19.3				
Max Q Clear Time (g_c+l1), s		29.3		2.0			11.2	13.6				
Green Ext Time (p_c), s		4.4		5.1			0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay				23.4								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
25: SR 99 SB Ramps & 8 Mile Road

Cumulative plus Project PM
08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑	↑↑						↑	↑↑
Traffic Volume (veh/h)	0	806	429	49	1019	0	0	0	0	48	0	361
Future Volume (veh/h)	0	806	429	49	1019	0	0	0	0	48	0	361
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	876	466	53	1108	0				52	0	392
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3296	1023	69	2595	0				303	0	474
Arrive On Green	0.00	1.00	1.00	0.08	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	5274	1585	1781	3647	0				1781	0	2790
Grp Volume(v), veh/h	0	876	466	53	1108	0				52	0	392
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1781	1777	0				1781	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0				2.5	0.0	13.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.9	0.0	0.0				2.5	0.0	13.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3296	1023	69	2595	0				303	0	474
V/C Ratio(X)	0.00	0.27	0.46	0.77	0.43	0.00				0.17	0.00	0.83
Avail Cap(c_a), veh/h	0	3296	1023	203	2595	0				470	0	736
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.96	0.96	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	45.7	0.0	0.0				35.5	0.0	40.1
Incr Delay (d2), s/veh	0.0	0.2	1.4	15.4	0.5	0.0				0.3	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	1.5	0.2	0.0				1.1	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	1.4	61.1	0.5	0.0				35.8	0.0	44.7
LnGrp LOS	A	A	A	E	A	A				D	A	D
Approach Vol, veh/h		1342			1161						444	
Approach Delay, s/veh		0.6			3.2						43.6	
Approach LOS		A			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			8.5	70.0		21.6		78.4				
Change Period (Y+Rc), s			4.6	5.4		4.6		5.4				
Max Green Setting (Gmax), s			11.4	47.6		26.4		63.6				
Max Q Clear Time (g_c+I1), s			4.9	2.0		15.6		2.0				
Green Ext Time (p_c), s			0.0	9.1		1.4		9.5				
Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary
 26: SR 99 NB Ramps & 8 Mile Road

Cumulative plus Project PM
 08/19/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	356	0	0	276	6	560	0	14	0	0	0
Future Volume (veh/h)	294	356	0	0	276	6	560	0	14	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	320	387	0	0	300	7	609	0	15			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1327	2466	0	0	910	406	734	0	327			
Arrive On Green	0.13	0.23	0.00	0.00	0.17	0.17	0.21	0.00	0.21			
Sat Flow, veh/h	3456	3647	0	0	3647	1585	3563	0	1585			
Grp Volume(v), veh/h	320	387	0	0	300	7	609	0	15			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	1781	0	1585			
Q Serve(g_s), s	8.3	8.7	0.0	0.0	7.4	0.4	16.4	0.0	0.8			
Cycle Q Clear(g_c), s	8.3	8.7	0.0	0.0	7.4	0.4	16.4	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1327	2466	0	0	910	406	734	0	327			
V/C Ratio(X)	0.24	0.16	0.00	0.00	0.33	0.02	0.83	0.00	0.05			
Avail Cap(c_a), veh/h	1327	2466	0	0	910	406	1368	0	609			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.5	15.2	0.0	0.0	33.9	31.0	38.0	0.0	31.8			
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.0	0.9	0.1	2.5	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.6	3.4	0.0	0.0	3.3	0.1	7.2	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	15.3	0.0	0.0	34.8	31.0	40.5	0.0	31.9			
LnGrp LOS	C	B	A	A	C	C	D	A	C			
Approach Vol, veh/h		707			307			624				
Approach Delay, s/veh		22.2			34.7			40.3				
Approach LOS		C			C			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		25.2		74.8			43.8	31.0				
Change Period (Y+Rc), s		4.6		5.4			5.4	* 5.4				
Max Green Setting (Gmax), s		38.4		51.6			21.4	* 26				
Max Q Clear Time (g_c+I1), s		18.4		10.7			10.3	9.4				
Green Ext Time (p_c), s		2.2		2.5			0.8	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				31.5								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Queues

Cumulative plus Project PM

08/19/2020

1: SB I-5 Ramps & 8 Mile Rd

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1085	431	530	1438	127	126	225
v/c Ratio	0.54	0.52	0.61	0.39	0.42	0.41	0.14
Control Delay	18.3	4.4	25.9	2.7	41.1	41.0	0.2
Queue Delay	0.0	0.0	14.6	0.5	0.0	0.0	0.0
Total Delay	18.3	4.4	40.5	3.2	41.1	41.0	0.2
Queue Length 50th (ft)	157	0	150	49	75	75	0
Queue Length 95th (ft)	201	66	m182	64	135	135	0
Internal Link Dist (ft)	1867			161		261	
Turn Bay Length (ft)							
Base Capacity (vph)	2021	822	868	3666	304	305	1583
Starvation Cap Reductn	0	0	323	1572	0	0	0
Spillback Cap Reductn	15	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.52	0.97	0.69	0.42	0.41	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: NB I-5 Ramps & 8 Mile Rd



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	166	776	1084	519	520	997
v/c Ratio	0.95	0.45	0.88	0.55	0.55	1.08
Control Delay	96.0	14.5	47.8	16.6	16.6	75.7
Queue Delay	0.0	0.8	0.2	0.2	0.2	0.0
Total Delay	96.0	15.3	47.9	16.7	16.8	75.7
Queue Length 50th (ft)	87	86	193	207	207	~694
Queue Length 95th (ft)	#228	104	#248	307	307	#940
Internal Link Dist (ft)		161	3355		754	
Turn Bay Length (ft)						
Base Capacity (vph)	175	1723	1235	946	946	923
Starvation Cap Reductn	0	590	0	0	0	0
Spillback Cap Reductn	0	0	8	58	58	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.68	0.88	0.58	0.59	1.08

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	876	466	53	1108	52	392
v/c Ratio	0.31	0.43	0.36	0.46	no cap	0.50
Control Delay	9.3	2.8	42.7	5.9		18.1
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	9.3	2.8	42.7	5.9	Error	18.1
Queue Length 50th (ft)	116	57	26	211	~69	57
Queue Length 95th (ft)	68	22	m56	260	#148	105
Internal Link Dist (ft)	928			642	1579	
Turn Bay Length (ft)			300			500
Base Capacity (vph)	2870	1096	201	2385	1	876
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.43	0.26	0.46	52.00	0.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
26: SR 99 NB Ramps & 8 Mile Road

Cumulative plus Project PM
08/19/2020



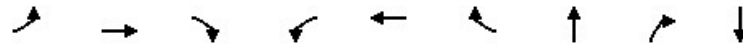
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	320	387	300	7	304	305	15
v/c Ratio	0.44	0.21	0.33	0.02	0.47	0.47	0.02
Control Delay	23.6	2.0	18.6	0.0	26.2	26.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	2.0	18.6	0.0	26.2	26.2	0.1
Queue Length 50th (ft)	93	3	84	0	150	151	0
Queue Length 95th (ft)	130	4	70	m0	233	233	0
Internal Link Dist (ft)		642	402			1010	
Turn Bay Length (ft)	300			125	400		400
Base Capacity (vph)	734	1826	905	461	645	645	660
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.21	0.33	0.02	0.47	0.47	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing AM
 08/19/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	342	271	148	355	14	193	182	49
v/c Ratio	0.04	0.60	0.40	0.50	0.40	0.02	0.57	0.34	0.12
Control Delay	26.8	21.4	4.5	32.2	11.3	0.0	26.4	5.6	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	21.4	4.5	32.2	11.3	0.0	26.4	5.6	15.4
Queue Length 50th (ft)	2	93	0	44	54	0	54	0	10
Queue Length 95th (ft)	13	180	44	#132	171	0	124	41	35
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	193	904	907	317	1117	1002	524	730	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.30	0.47	0.32	0.01	0.37	0.25	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing AM
 08/19/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	315	249	136	327	13	155	23	167	12	25	8
Future Volume (veh/h)	6	315	249	136	327	13	155	23	167	12	25	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	342	271	148	355	14	168	25	182	13	27	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	514	435	192	697	591	438	39	299	155	219	58
Arrive On Green	0.01	0.27	0.27	0.11	0.37	0.37	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1405	209	1585	200	1163	307
Grp Volume(v), veh/h	7	342	271	148	355	14	193	0	182	49	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1614	0	1585	1670	0	0
Q Serve(g_s), s	0.2	6.3	5.8	3.1	5.7	0.2	0.0	0.0	4.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.3	5.8	3.1	5.7	0.2	3.8	0.0	4.1	3.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		1.00	0.27		0.18
Lane Grp Cap(c), veh/h	17	514	435	192	697	591	477	0	299	432	0	0
V/C Ratio(X)	0.42	0.67	0.62	0.77	0.51	0.02	0.40	0.00	0.61	0.11	0.00	0.00
Avail Cap(c_a), veh/h	229	1068	905	376	1222	1035	864	0	730	859	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.2	12.5	12.3	16.9	9.4	7.7	14.4	0.0	14.5	13.2	0.0	0.0
Incr Delay (d2), s/veh	15.9	1.5	1.5	6.5	0.6	0.0	0.6	0.0	2.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	1.6	1.3	1.5	0.0	1.3	0.0	1.2	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	14.0	13.8	23.4	10.0	7.7	14.9	0.0	16.5	13.3	0.0	0.0
LnGrp LOS	D	B	B	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		620			517			375			49	
Approach Delay, s/veh		14.2			13.8			15.7			13.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.4	10.0	16.5		12.4	6.2	20.3				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		17.9	8.2	22.2		17.9	5.0	25.4				
Max Q Clear Time (g_c+I1), s		6.1	5.1	8.3		5.8	2.2	7.7				
Green Ext Time (p_c), s		1.3	0.1	2.4		0.1	0.0	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Queues
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing AM
 08/19/2020

























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	28	129	401	80	285	9	192	71	41	62
v/c Ratio	0.10	0.19	0.48	0.26	0.33	0.01	0.41	0.15	0.12	0.15
Control Delay	31.3	22.2	4.9	31.7	19.2	0.0	25.7	15.3	28.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	22.2	4.9	31.7	19.2	0.0	25.7	15.3	28.8	0.8
Queue Length 50th (ft)	9	39	0	25	66	0	58	11	13	0
Queue Length 95th (ft)	38	92	63	#87	189	0	141	48	47	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	283	902	973	337	929	868	857	860	787	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.14	0.41	0.24	0.31	0.01	0.22	0.08	0.05	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

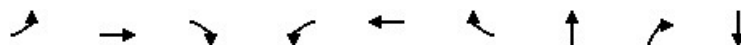
HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	119	369	74	262	8	177	38	28	4	34	57
Future Volume (veh/h)	26	119	369	74	262	8	177	38	28	4	34	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	129	401	80	285	9	192	41	30	4	37	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	560	474	116	622	527	270	152	111	13	124	117
Arrive On Green	0.03	0.30	0.30	0.07	0.33	0.33	0.15	0.15	0.15	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1004	734	182	1680	1585
Grp Volume(v), veh/h	28	129	401	80	285	9	192	0	71	41	0	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1738	1861	0	1585
Q Serve(g_s), s	0.8	2.8	12.6	2.3	6.4	0.2	5.4	0.0	1.9	1.1	0.0	2.0
Cycle Q Clear(g_c), s	0.8	2.8	12.6	2.3	6.4	0.2	5.4	0.0	1.9	1.1	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.10		1.00
Lane Grp Cap(c), veh/h	57	560	474	116	622	527	270	0	263	137	0	117
V/C Ratio(X)	0.49	0.23	0.85	0.69	0.46	0.02	0.71	0.00	0.27	0.30	0.00	0.53
Avail Cap(c_a), veh/h	191	775	657	228	814	689	738	0	720	610	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	14.0	17.5	24.3	14.0	11.9	21.4	0.0	19.9	23.3	0.0	23.7
Incr Delay (d2), s/veh	6.5	0.2	7.3	7.0	0.5	0.0	3.5	0.0	0.5	1.2	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	4.6	1.1	2.2	0.1	2.3	0.0	0.7	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	14.2	24.8	31.3	14.5	11.9	24.9	0.0	20.5	24.5	0.0	27.4
LnGrp LOS	C	B	C	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		558			374			263				103
Approach Delay, s/veh		22.7			18.0			23.7				26.3
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.1	9.3	21.7		9.0	7.5	23.5				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		22.0	6.8	22.0		17.4	5.7	23.1				
Max Q Clear Time (g_c+I1), s		7.4	4.3	14.6		4.0	2.8	8.4				
Green Ext Time (p_c), s		0.8	0.0	1.3		0.2	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			21.8									
HCM 6th LOS			C									

Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing PM
 08/19/2020



























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	3	372	237	115	454	21	230	158	83
v/c Ratio	0.03	0.41	0.26	0.55	0.39	0.02	0.75	0.32	0.22
Control Delay	39.0	18.8	3.5	45.7	11.4	0.1	46.1	4.6	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	18.8	3.5	45.7	11.4	0.1	46.1	4.6	24.0
Queue Length 50th (ft)	2	134	0	60	104	0	117	0	33
Queue Length 95th (ft)	10	243	45	111	263	0	181	33	64
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	112	918	900	250	1164	1026	407	599	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.41	0.26	0.46	0.39	0.02	0.57	0.26	0.17

Intersection Summary











HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing PM
 08/19/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	3	342	218	106	418	19	193	18	145	19	47	10	
Future Volume (veh/h)	3	342	218	106	418	19	193	18	145	19	47	10	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	3	372	237	115	454	21	210	20	158	21	51	11	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	7	801	679	146	947	803	235	15	472	52	105	16	
Arrive On Green	0.00	0.43	0.43	0.08	0.51	0.51	0.30	0.30	0.30	0.30	0.30	0.30	
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	525	50	1585	0	353	54	
Grp Volume(v), veh/h	3	372	237	115	454	21	230	0	158	83	0	0	
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	575	0	1585	407	0	0	
Q Serve(g_s), s	0.1	12.3	8.7	5.5	13.8	0.6	0.0	0.0	6.8	0.0	0.0	0.0	
Cycle Q Clear(g_c), s	0.1	12.3	8.7	5.5	13.8	0.6	25.9	0.0	6.8	25.9	0.0	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	0.91		1.00	0.25		0.13	
Lane Grp Cap(c), veh/h	7	801	679	146	947	803	250	0	472	173	0	0	
V/C Ratio(X)	0.42	0.46	0.35	0.79	0.48	0.03	0.92	0.00	0.33	0.48	0.00	0.00	
Avail Cap(c_a), veh/h	102	801	679	250	947	803	250	0	472	173	0	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	0.00	
Uniform Delay (d), s/veh	43.2	17.7	16.7	39.2	14.0	10.7	33.9	0.0	23.8	24.8	0.0	0.0	
Incr Delay (d2), s/veh	34.6	1.9	1.4	7.3	1.4	0.0	35.8	0.0	0.4	2.1	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.1	5.2	3.1	2.6	5.4	0.2	7.3	0.0	2.4	1.3	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	77.8	19.7	18.1	46.5	15.4	10.8	69.7	0.0	24.2	26.9	0.0	0.0	
LnGrp LOS	E	B	B	D	B	B	E	A	C	C	A	A	
Approach Vol, veh/h		612			590			388			83		
Approach Delay, s/veh		19.4			21.3			51.2			26.9		
Approach LOS		B			C			D			C		
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		31.0	12.9	43.1		31.0	6.1	49.9					
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8					
Max Green Setting (Gmax), s		25.9	12.2	31.2		25.9	5.0	39.2					
Max Q Clear Time (g_c+I1), s		27.9	7.5	14.3		27.9	2.1	15.8					
Green Ext Time (p_c), s		0.0	0.1	2.6		0.0	0.0	2.6					
Intersection Summary													
HCM 6th Ctrl Delay			27.8										
HCM 6th LOS			C										

Queues
13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing PM
08/19/2020
























										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	27	254	292	58	235	9	353	153	48	59
v/c Ratio	0.28	0.35	0.37	0.35	0.27	0.01	0.84	0.33	0.30	0.17
Control Delay	48.6	25.8	4.9	43.4	19.1	0.0	51.2	15.1	43.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	25.8	4.9	43.4	19.1	0.0	51.2	15.1	43.2	1.0
Queue Length 50th (ft)	15	114	0	32	77	0	187	31	26	0
Queue Length 95th (ft)	42	202	61	67	168	0	#313	80	59	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	97	726	795	167	885	834	466	507	365	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.35	0.37	0.35	0.27	0.01	0.76	0.30	0.13	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

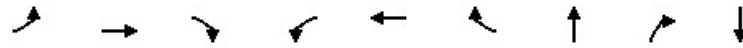
MITIG8 Existing PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	234	269	53	216	8	325	55	86	10	34	54
Future Volume (veh/h)	25	234	269	53	216	8	325	55	86	10	34	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	254	292	58	235	9	353	60	93	11	37	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	818	693	75	452	383	398	148	229	24	82	91
Arrive On Green	0.24	0.44	0.44	0.04	0.24	0.24	0.22	0.22	0.22	0.06	0.06	0.06
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	661	1025	424	1425	1585
Grp Volume(v), veh/h	27	254	292	58	235	9	353	0	153	48	0	59
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1686	1849	0	1585
Q Serve(g_s), s	1.1	8.0	11.6	2.9	9.9	0.4	17.5	0.0	7.1	2.3	0.0	3.3
Cycle Q Clear(g_c), s	1.1	8.0	11.6	2.9	9.9	0.4	17.5	0.0	7.1	2.3	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	0.23		1.00
Lane Grp Cap(c), veh/h	424	818	693	75	452	383	398	0	377	106	0	91
V/C Ratio(X)	0.06	0.31	0.42	0.77	0.52	0.02	0.89	0.00	0.41	0.45	0.00	0.65
Avail Cap(c_a), veh/h	424	818	693	98	452	383	468	0	443	366	0	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	16.7	17.6	43.1	29.9	26.3	34.2	0.0	30.2	41.5	0.0	42.0
Incr Delay (d2), s/veh	0.1	0.9	1.7	23.6	4.2	0.1	16.5	0.0	0.7	3.0	0.0	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.3	4.1	1.7	4.7	0.2	9.1	0.0	2.9	1.1	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	17.6	19.4	66.7	34.1	26.4	50.7	0.0	30.9	44.5	0.0	49.6
LnGrp LOS	C	B	B	E	C	C	D	A	C	D	A	D
Approach Vol, veh/h		573			302			506			107	
Approach Delay, s/veh		18.9			40.2			44.7			47.3	
Approach LOS		B			D			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.4	9.6	45.6		10.3	27.5	27.8				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		23.9	5.0	22.0		18.0	5.0	22.0				
Max Q Clear Time (g_c+I1), s		19.5	4.9	13.6		5.3	3.1	11.9				
Green Ext Time (p_c), s		0.9	0.0	1.6		0.3	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			34.0									
HCM 6th LOS			C									

Queues
12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 AM

08/19/2020
























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	343	273	148	362	14	193	182	49
v/c Ratio	0.04	0.60	0.40	0.51	0.41	0.02	0.57	0.34	0.12
Control Delay	27.2	21.3	4.4	32.5	11.4	0.0	26.5	5.6	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	21.3	4.4	32.5	11.4	0.0	26.5	5.6	15.5
Queue Length 50th (ft)	2	93	0	44	56	0	54	0	10
Queue Length 95th (ft)	13	181	44	#132	176	0	124	41	35
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	192	901	906	316	1118	1003	522	728	641
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.30	0.47	0.32	0.01	0.37	0.25	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

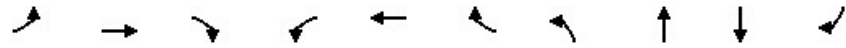
MITIG8 Existing plus Phase 1 AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	316	251	136	333	13	155	23	167	12	25	8
Future Volume (veh/h)	6	316	251	136	333	13	155	23	167	12	25	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	343	273	148	362	14	168	25	182	13	27	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	515	436	192	698	592	437	39	298	155	219	58
Arrive On Green	0.01	0.28	0.28	0.11	0.37	0.37	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1404	209	1585	199	1162	306
Grp Volume(v), veh/h	7	343	273	148	362	14	193	0	182	49	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1612	0	1585	1668	0	0
Q Serve(g_s), s	0.2	6.3	5.9	3.1	5.9	0.2	0.0	0.0	4.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.3	5.9	3.1	5.9	0.2	3.8	0.0	4.1	3.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		1.00	0.27		0.18
Lane Grp Cap(c), veh/h	17	515	436	192	698	592	477	0	298	431	0	0
V/C Ratio(X)	0.42	0.67	0.63	0.77	0.52	0.02	0.40	0.00	0.61	0.11	0.00	0.00
Avail Cap(c_a), veh/h	229	1067	904	375	1220	1034	862	0	729	858	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.2	12.5	12.4	16.9	9.5	7.7	14.4	0.0	14.5	13.2	0.0	0.0
Incr Delay (d2), s/veh	15.9	1.5	1.5	6.5	0.6	0.0	0.6	0.0	2.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	1.6	1.3	1.5	0.0	1.3	0.0	1.2	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	14.0	13.8	23.4	10.1	7.7	14.9	0.0	16.5	13.3	0.0	0.0
LnGrp LOS	D	B	B	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		623			524			375			49	
Approach Delay, s/veh		14.2			13.8			15.7			13.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.4	10.0	16.5		12.4	6.2	20.3				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		17.9	8.2	22.2		17.9	5.0	25.4				
Max Q Clear Time (g_c+I1), s		6.1	5.1	8.3		5.8	2.2	7.9				
Green Ext Time (p_c), s		1.3	0.1	2.4		0.1	0.0	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Queues
13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 AM

08/19/2020

























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	28	129	401	80	286	9	199	71	41	62
v/c Ratio	0.10	0.19	0.48	0.26	0.33	0.01	0.41	0.14	0.13	0.15
Control Delay	31.5	22.4	5.0	32.1	19.3	0.0	25.7	15.3	29.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	22.4	5.0	32.1	19.3	0.0	25.7	15.3	29.1	0.8
Queue Length 50th (ft)	9	39	0	25	66	0	60	11	13	0
Queue Length 95th (ft)	38	93	63	#88	191	0	146	48	47	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	282	899	971	336	925	865	854	857	784	766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.14	0.41	0.24	0.31	0.01	0.23	0.08	0.05	0.08

Intersection Summary










95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	119	369	74	263	8	183	38	28	4	34	57
Future Volume (veh/h)	26	119	369	74	263	8	183	38	28	4	34	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	129	401	80	286	9	199	41	30	4	37	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	559	474	116	621	526	277	156	114	13	123	116
Arrive On Green	0.03	0.30	0.30	0.06	0.33	0.33	0.16	0.16	0.16	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1004	734	182	1680	1585
Grp Volume(v), veh/h	28	129	401	80	286	9	199	0	71	41	0	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1738	1861	0	1585
Q Serve(g_s), s	0.8	2.8	12.7	2.4	6.5	0.2	5.7	0.0	1.9	1.1	0.0	2.0
Cycle Q Clear(g_c), s	0.8	2.8	12.7	2.4	6.5	0.2	5.7	0.0	1.9	1.1	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.10		1.00
Lane Grp Cap(c), veh/h	57	559	474	116	621	526	277	0	270	136	0	116
V/C Ratio(X)	0.49	0.23	0.85	0.69	0.46	0.02	0.72	0.00	0.26	0.30	0.00	0.53
Avail Cap(c_a), veh/h	190	769	652	226	808	684	733	0	715	605	0	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	14.1	17.6	24.5	14.1	12.0	21.5	0.0	19.9	23.5	0.0	23.9
Incr Delay (d2), s/veh	6.5	0.2	7.5	7.1	0.5	0.0	3.5	0.0	0.5	1.2	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	4.7	1.1	2.2	0.1	2.4	0.0	0.7	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	14.3	25.1	31.6	14.6	12.0	25.0	0.0	20.4	24.7	0.0	27.7
LnGrp LOS	C	B	C	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		558			375			270				103
Approach Delay, s/veh		23.0			18.2			23.8				26.5
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.4	9.3	21.8		9.0	7.5	23.6				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		22.0	6.8	22.0		17.4	5.7	23.1				
Max Q Clear Time (g_c+I1), s		7.7	4.4	14.7		4.0	2.8	8.5				
Green Ext Time (p_c), s		0.8	0.0	1.3		0.2	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			C									























Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	3	373	242	115	458	21	230	158	83
v/c Ratio	0.03	0.41	0.27	0.55	0.39	0.02	0.75	0.32	0.22
Control Delay	39.0	18.8	3.5	45.7	11.4	0.1	46.1	4.6	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	18.8	3.5	45.7	11.4	0.1	46.1	4.6	24.0
Queue Length 50th (ft)	2	134	0	60	105	0	117	0	33
Queue Length 95th (ft)	10	245	46	111	267	0	181	33	64
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	112	918	903	250	1164	1026	407	599	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.41	0.27	0.46	0.39	0.02	0.57	0.26	0.17
Intersection Summary									

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 PM

08/24/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	343	223	106	421	19	193	18	145	19	47	10
Future Volume (veh/h)	3	343	223	106	421	19	193	18	145	19	47	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	373	242	115	458	21	210	20	158	21	51	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	801	679	146	947	803	235	15	472	52	105	16
Arrive On Green	0.00	0.43	0.43	0.08	0.51	0.51	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	525	50	1585	0	353	54
Grp Volume(v), veh/h	3	373	242	115	458	21	230	0	158	83	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	575	0	1585	407	0	0
Q Serve(g_s), s	0.1	12.4	9.0	5.5	13.9	0.6	0.0	0.0	6.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	12.4	9.0	5.5	13.9	0.6	25.9	0.0	6.8	25.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.91		1.00	0.25		0.13
Lane Grp Cap(c), veh/h	7	801	679	146	947	803	250	0	472	173	0	0
V/C Ratio(X)	0.42	0.47	0.36	0.79	0.48	0.03	0.92	0.00	0.33	0.48	0.00	0.00
Avail Cap(c_a), veh/h	102	801	679	250	947	803	250	0	472	173	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.2	17.8	16.8	39.2	14.0	10.7	33.9	0.0	23.8	24.8	0.0	0.0
Incr Delay (d2), s/veh	34.6	1.9	1.5	7.3	1.4	0.0	35.8	0.0	0.4	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.2	3.2	2.6	5.4	0.2	7.3	0.0	2.4	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.8	19.7	18.2	46.5	15.5	10.8	69.7	0.0	24.2	26.9	0.0	0.0
LnGrp LOS	E	B	B	D	B	B	E	A	C	C	A	A
Approach Vol, veh/h		618			594			388			83	
Approach Delay, s/veh		19.4			21.3			51.2			26.9	
Approach LOS		B			C			D			C	

Baseline

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 PM
 08/24/2020

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.0	12.9	43.1	31.0	6.1	49.9
Change Period (Y+Rc), s	5.1	5.8	5.8	5.1	5.8	5.8
Max Green Setting (Gmax), s	25.9	12.2	31.2	25.9	5.0	39.2
Max Q Clear Time (g_c+l1), s	27.9	7.5	14.4	27.9	2.1	15.9
Green Ext Time (p_c), s	0.0	0.1	2.6	0.0	0.0	2.6
Intersection Summary						
HCM 6th Ctrl Delay	27.8					
HCM 6th LOS	C					

Queues
13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 PM

08/24/2020



























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	27	255	293	58	235	9	357	153	48	59
v/c Ratio	0.28	0.35	0.37	0.35	0.27	0.01	0.84	0.33	0.30	0.17
Control Delay	48.6	25.9	4.9	43.4	19.2	0.0	51.2	15.0	43.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	25.9	4.9	43.4	19.2	0.0	51.2	15.0	43.2	1.0
Queue Length 50th (ft)	15	115	0	32	78	0	189	30	26	0
Queue Length 95th (ft)	42	203	61	67	168	0	#319	80	59	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	97	722	793	167	881	831	466	507	365	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.35	0.37	0.35	0.27	0.01	0.77	0.30	0.13	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Phase 1 PM
 08/24/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	235	270	53	216	8	328	55	86	10	34	54
Future Volume (veh/h)	25	235	270	53	216	8	328	55	86	10	34	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	255	293	58	235	9	357	60	93	11	37	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	815	690	75	452	383	402	149	231	24	82	91
Arrive On Green	0.24	0.44	0.44	0.04	0.24	0.24	0.23	0.23	0.23	0.06	0.06	0.06
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	661	1025	424	1425	1585
Grp Volume(v), veh/h	27	255	293	58	235	9	357	0	153	48	0	59
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1686	1849	0	1585
Q Serve(g_s), s	1.1	8.1	11.6	2.9	9.9	0.4	17.7	0.0	7.0	2.3	0.0	3.3
Cycle Q Clear(g_c), s	1.1	8.1	11.6	2.9	9.9	0.4	17.7	0.0	7.0	2.3	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	0.23		1.00
Lane Grp Cap(c), veh/h	420	815	690	75	452	383	402	0	380	106	0	91
V/C Ratio(X)	0.06	0.31	0.42	0.77	0.52	0.02	0.89	0.00	0.40	0.45	0.00	0.65
Avail Cap(c_a), veh/h	420	815	690	98	452	383	468	0	443	366	0	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	16.8	17.8	43.1	29.9	26.3	34.1	0.0	30.0	41.5	0.0	42.0
Incr Delay (d2), s/veh	0.1	0.9	1.8	23.6	4.2	0.1	16.9	0.0	0.7	3.0	0.0	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.4	4.2	1.7	4.7	0.2	9.2	0.0	2.8	1.1	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	17.7	19.6	66.7	34.1	26.4	51.0	0.0	30.7	44.5	0.0	49.6
LnGrp LOS	C	B	B	E	C	C	D	A	C	D	A	D
Approach Vol, veh/h		575			302			510			107	
Approach Delay, s/veh		19.1			40.2			44.9			47.3	
Approach LOS		B			D			D			D	

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

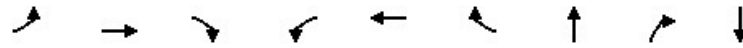
MITIG8 Existing plus Phase 1 PM
 08/24/2020

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.6	9.6	45.4	10.3	27.3	27.8
Change Period (Y+Rc), s	5.1	5.8	5.8	5.1	5.8	5.8
Max Green Setting (Gmax), s	23.9	5.0	22.0	18.0	5.0	22.0
Max Q Clear Time (g_c+l1), s	19.7	4.9	13.6	5.3	3.1	11.9
Green Ext Time (p_c), s	0.9	0.0	1.6	0.3	0.0	0.8
Intersection Summary						
HCM 6th Ctrl Delay	34.2					
HCM 6th LOS	C					

Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Buildout AM

08/19/2020
























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	347	292	148	426	14	195	182	49
v/c Ratio	0.04	0.60	0.42	0.50	0.48	0.02	0.59	0.34	0.12
Control Delay	27.3	21.5	4.5	32.0	12.1	0.0	27.4	5.7	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	21.5	4.5	32.0	12.1	0.0	27.4	5.7	15.8
Queue Length 50th (ft)	2	95	0	45	68	0	56	0	10
Queue Length 95th (ft)	13	183	45	#128	209	0	126	41	35
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	194	914	925	329	1145	1024	510	716	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.32	0.45	0.37	0.01	0.38	0.25	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

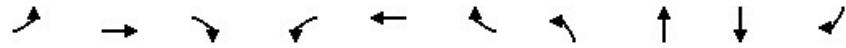
MITIG8 Existing plus Buildout AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	319	269	136	392	13	156	23	167	12	25	8
Future Volume (veh/h)	6	319	269	136	392	13	156	23	167	12	25	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	347	292	148	426	14	170	25	182	13	27	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	520	441	192	704	596	428	38	300	150	213	55
Arrive On Green	0.01	0.28	0.28	0.11	0.38	0.38	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1356	199	1585	179	1123	293
Grp Volume(v), veh/h	7	347	292	148	426	14	195	0	182	49	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1555	0	1585	1596	0	0
Q Serve(g_s), s	0.2	6.5	6.4	3.2	7.2	0.2	0.0	0.0	4.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.5	6.4	3.2	7.2	0.2	4.3	0.0	4.1	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		1.00	0.27		0.18
Lane Grp Cap(c), veh/h	17	520	441	192	704	596	466	0	300	418	0	0
V/C Ratio(X)	0.42	0.67	0.66	0.77	0.61	0.02	0.42	0.00	0.61	0.12	0.00	0.00
Avail Cap(c_a), veh/h	227	1066	904	385	1233	1045	826	0	702	816	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.4	12.6	12.6	17.1	9.9	7.7	14.6	0.0	14.6	13.3	0.0	0.0
Incr Delay (d2), s/veh	15.9	1.5	1.7	6.5	0.8	0.0	0.6	0.0	2.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.1	1.8	1.3	2.0	0.0	1.3	0.0	1.2	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	14.1	14.3	23.5	10.7	7.7	15.2	0.0	16.6	13.4	0.0	0.0
LnGrp LOS	D	B	B	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		646			588			377			49	
Approach Delay, s/veh		14.4			13.9			15.9			13.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.5	10.0	16.7		12.5	6.2	20.6				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		17.4	8.5	22.4		17.4	5.0	25.9				
Max Q Clear Time (g_c+I1), s		6.3	5.2	8.5		6.3	2.2	9.2				
Green Ext Time (p_c), s		1.3	0.1	2.5		0.1	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Queues
13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Buildout AM

08/19/2020


























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	28	132	403	80	290	9	257	71	41	63
v/c Ratio	0.16	0.31	0.60	0.37	0.49	0.01	0.58	0.15	0.17	0.18
Control Delay	34.7	24.8	7.1	37.4	22.7	0.0	28.2	14.7	30.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	24.8	7.1	37.4	22.7	0.0	28.2	14.7	30.9	1.1
Queue Length 50th (ft)	9	42	0	27	73	0	80	11	13	0
Queue Length 95th (ft)	39	98	65	#100	201	0	185	47	49	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	178	826	926	220	871	824	785	790	672	680
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.16	0.44	0.36	0.33	0.01	0.33	0.09	0.06	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

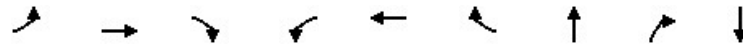
MITIG8 Existing plus Buildout AM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	121	371	74	267	8	236	38	28	4	34	58
Future Volume (veh/h)	26	121	371	74	267	8	236	38	28	4	34	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	132	403	80	290	9	257	41	30	4	37	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	554	469	112	613	519	333	188	137	13	119	112
Arrive On Green	0.03	0.30	0.30	0.06	0.33	0.33	0.19	0.19	0.19	0.07	0.07	0.07
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1004	734	182	1680	1585
Grp Volume(v), veh/h	28	132	403	80	290	9	257	0	71	41	0	63
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1738	1861	0	1585
Q Serve(g_s), s	0.9	3.0	13.7	2.5	7.0	0.2	7.8	0.0	2.0	1.2	0.0	2.2
Cycle Q Clear(g_c), s	0.9	3.0	13.7	2.5	7.0	0.2	7.8	0.0	2.0	1.2	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.10		1.00
Lane Grp Cap(c), veh/h	56	554	469	112	613	519	333	0	325	132	0	112
V/C Ratio(X)	0.50	0.24	0.86	0.71	0.47	0.02	0.77	0.00	0.22	0.31	0.00	0.56
Avail Cap(c_a), veh/h	157	723	613	194	762	646	689	0	672	589	0	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	15.2	18.9	26.2	15.2	12.9	22.0	0.0	19.6	25.1	0.0	25.6
Incr Delay (d2), s/veh	6.8	0.2	9.4	8.1	0.6	0.0	3.8	0.0	0.3	1.3	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	5.3	1.2	2.5	0.1	3.3	0.0	0.8	0.5	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	15.4	28.3	34.2	15.8	12.9	25.8	0.0	19.9	26.4	0.0	29.9
LnGrp LOS	C	B	C	C	B	B	C	A	B	C	A	C
Approach Vol, veh/h		563			379			328				104
Approach Delay, s/veh		25.6			19.6			24.5				28.5
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.7	9.4	22.6		9.1	7.6	24.4				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		22.0	6.2	22.0		18.0	5.0	23.2				
Max Q Clear Time (g_c+I1), s		9.8	4.5	15.7		4.2	2.9	9.0				
Green Ext Time (p_c), s		0.9	0.0	1.2		0.3	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

Queues
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Buildout PM

08/19/2020

























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	3	387	302	115	488	21	230	158	83
v/c Ratio	0.02	0.64	0.42	0.46	0.56	0.03	0.67	0.29	0.19
Control Delay	27.7	22.2	4.2	33.3	14.0	0.1	31.0	5.5	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	22.2	4.2	33.3	14.0	0.1	31.0	5.5	16.7
Queue Length 50th (ft)	1	114	0	38	94	0	70	0	19
Queue Length 95th (ft)	8	201	45	#104	251	0	#168	38	52
Internal Link Dist (ft)		842			1019		447		1579
Turn Bay Length (ft)	200		200	200		200		200	
Base Capacity (vph)	185	903	923	266	1089	980	477	691	614
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.43	0.33	0.43	0.45	0.02	0.48	0.23	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

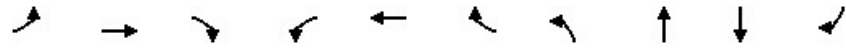
HCM 6th Signalized Intersection Summary
 12: West SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Buildout PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	356	278	106	449	19	193	18	145	19	47	10
Future Volume (veh/h)	3	356	278	106	449	19	193	18	145	19	47	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	387	302	115	488	21	210	20	158	21	51	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	510	432	148	657	557	330	26	528	86	166	26
Arrive On Green	0.00	0.27	0.27	0.08	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	605	77	1585	6	499	77
Grp Volume(v), veh/h	3	387	302	115	488	21	230	0	158	83	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	682	0	1585	582	0	0
Q Serve(g_s), s	0.1	10.2	9.2	3.4	12.3	0.5	0.2	0.0	4.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.2	9.2	3.4	12.3	0.5	17.9	0.0	4.0	17.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.91		1.00	0.25		0.13
Lane Grp Cap(c), veh/h	7	510	432	148	657	557	356	0	528	278	0	0
V/C Ratio(X)	0.41	0.76	0.70	0.78	0.74	0.04	0.65	0.00	0.30	0.30	0.00	0.00
Avail Cap(c_a), veh/h	166	808	685	239	885	750	356	0	529	278	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.7	17.9	17.5	24.1	15.3	11.4	17.9	0.0	13.2	13.9	0.0	0.0
Incr Delay (d2), s/veh	33.6	2.4	2.1	8.5	2.3	0.0	4.0	0.0	0.3	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.9	3.0	1.6	4.5	0.1	2.8	0.0	1.2	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	20.3	19.6	32.6	17.6	11.5	21.9	0.0	13.6	14.5	0.0	0.0
LnGrp LOS	E	C	B	C	B	B	C	A	B	B	A	A
Approach Vol, veh/h		692			624			388			83	
Approach Delay, s/veh		20.1			20.1			18.5			14.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.3	20.4		23.0	6.0	24.7				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		17.9	7.2	23.2		17.9	5.0	25.4				
Max Q Clear Time (g_c+I1), s		19.9	5.4	12.2		19.9	2.1	14.3				
Green Ext Time (p_c), s		0.0	0.0	2.5		0.0	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

Queues

13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	28	261	300	58	238	9	384	153	48	59
v/c Ratio	0.18	0.58	0.49	0.37	0.42	0.02	0.71	0.26	0.21	0.17
Control Delay	37.8	30.6	6.4	43.2	24.0	0.0	32.0	12.5	34.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	30.6	6.4	43.2	24.0	0.0	32.0	12.5	34.0	1.1
Queue Length 50th (ft)	12	107	0	26	76	0	151	22	21	0
Queue Length 95th (ft)	40	185	57	#79	169	0	#315	72	55	0
Internal Link Dist (ft)		1019			822			448	1634	
Turn Bay Length (ft)	200		200	200		200				
Base Capacity (vph)	156	735	806	156	766	744	716	735	586	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.36	0.37	0.37	0.31	0.01	0.54	0.21	0.08	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 13: East SR 99 Frontage Rd (8 Mile) & 8 Mile Road

MITIG8 Existing plus Buildout PM
 08/19/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	240	276	53	219	8	353	55	86	10	34	54
Future Volume (veh/h)	26	240	276	53	219	8	353	55	86	10	34	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	261	0	58	238	9	384	60	0	11	37	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	360		99	403	342	472	496		21	69	
Arrive On Green	0.03	0.19	0.00	0.06	0.22	0.22	0.27	0.27	0.00	0.05	0.05	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	0	424	1425	1585
Grp Volume(v), veh/h	28	261	0	58	238	9	384	60	0	48	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	0	1849	0	1585
Q Serve(g_s), s	0.8	6.5	0.0	1.6	5.7	0.2	10.0	1.2	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	0.8	6.5	0.0	1.6	5.7	0.2	10.0	1.2	0.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.23		1.00
Lane Grp Cap(c), veh/h	57	360		99	403	342	472	496		90	0	
V/C Ratio(X)	0.49	0.73		0.59	0.59	0.03	0.81	0.12		0.53	0.00	
Avail Cap(c_a), veh/h	179	839		179	839	711	820	861		669	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.7	18.8	0.0	22.9	17.5	15.4	17.1	13.9	0.0	23.1	0.0	0.0
Incr Delay (d2), s/veh	6.3	2.8	0.0	5.5	1.4	0.0	3.4	0.1	0.0	4.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	0.0	0.7	2.1	0.1	3.9	0.5	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	21.6	0.0	28.4	18.9	15.4	20.6	14.0	0.0	27.9	0.0	0.0
LnGrp LOS	C	C		C	B	B	C	B		C	A	
Approach Vol, veh/h		289	A		305			444	A		48	A
Approach Delay, s/veh		22.4			20.6			19.7			27.9	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.3	8.6	15.4		7.5	7.4	16.5				
Change Period (Y+Rc), s		5.1	5.8	5.8		5.1	5.8	5.8				
Max Green Setting (Gmax), s		22.9	5.0	22.3		18.0	5.0	22.3				
Max Q Clear Time (g_c+I1), s		12.0	3.6	8.5		3.3	2.8	7.7				
Green Ext Time (p_c), s		1.2	0.0	1.1		0.1	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			21.0									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection	
Intersection Delay, s/veh	15.8
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵	↶		↷	↶	↵
Traffic Vol, veh/h	196	50	152	197	301	233
Future Vol, veh/h	196	50	152	197	301	233
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	54	165	214	327	253
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	14.6	19.5	13.9
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	44%	100%	0%	0%	0%
Vol Thru, %	56%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	349	196	50	301	233
LT Vol	152	196	0	0	0
Through Vol	197	0	0	301	0
RT Vol	0	0	50	0	233
Lane Flow Rate	379	213	54	327	253
Geometry Grp	4	7	7	7	7

Degree of Util (X)	0.643	0.439	0.094	0.55	0.376
Departure Headway (Hd)	6.101	7.422	6.199	6.05	5.339
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	592	486	577	595	671
Service Time	4.148	5.176	3.952	3.799	3.088
HCM Lane V/C Ratio	0.64	0.438	0.094	0.55	0.377
HCM Control Delay	19.5	15.9	9.6	16	11.3
HCM Lane LOS	C	C	A	C	B
HCM 95th-tile Q	4.6	2.2	0.3	3.3	1.7

Intersection	
Intersection Delay, s/veh	28.1
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷		↶	↷	↷
Traffic Vol, veh/h	415	50	60	234	205	189
Future Vol, veh/h	415	50	60	234	205	189
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	451	54	65	254	223	205
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	44.7	20.7	14.1
HCM LOS	E	C	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	20%	100%	0%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	294	415	50	205	189
LT Vol	60	415	0	0	0
Through Vol	234	0	0	205	0
RT Vol	0	0	50	0	189
Lane Flow Rate	320	451	54	223	205
Geometry Grp	4	7	7	7	7

Degree of Util (X)	0.618	0.915	0.092	0.439	0.364
Departure Headway (Hd)	6.964	7.303	6.082	7.1	6.383
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	518	501	593	508	563
Service Time	5	5.003	3.782	4.841	4.124
HCM Lane V/C Ratio	0.618	0.9	0.091	0.439	0.364
HCM Control Delay	20.7	49	9.4	15.3	12.8
HCM Lane LOS	C	E	A	C	B
HCM 95th-tile Q	4.2	10.6	0.3	2.2	1.7

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Scenario Report

Scenario: EPAP No Proj AM
 Command: EPAP No Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 14 SR99 W Frontage & 99 SB Ramps	No / No	??? / ???
# 15 SR99 E Frontage & 99 NB Ramps	No / No	??? / ???

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 103 1	469 106 0	0 0 0 0	14 0 297
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	11.8

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.0]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=311]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=990]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 103 1	469 106 0	0 0 0 0	14 0 297

Major Street Volume: 679

Minor Approach Volume: 311

Minor Approach Volume Threshold: 414

SIGNAL WARRANT DISCLAIMER

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Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	152 197 0	0 301 233	154 0 50	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	29.9	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.7]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=204]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1087]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	152 197 0	0 301 233	154 0 50	0 0 0 0

Major Street Volume: 883

Minor Approach Volume: 204

Minor Approach Volume Threshold: 428

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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 Existing Plus Approved Projects No Proposed Project PM Peak Hour

Scenario Report

Scenario: EPAP No Proj PM
 Command: EPAP No Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects No Proposed Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 14 SR99 W Frontage & 99 SB Ramps	No / No	??? / ???
# 15 SR99 E Frontage & 99 NB Ramps	Yes / No	??? / ???

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 1! 0 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	112 0 7	382 143 0	0 0 0 0	26 0 335
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	12.3

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.2]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=361]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1005]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 1! 0 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	112 0 7	382 143 0	0 0 0 0	26 0 335

Major Street Volume: 644

Minor Approach Volume: 361

Minor Approach Volume Threshold: 431

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	60 234 0	0 204 188	395 0 50	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	62.0	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=7.7]

SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=445]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1131]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	60 234 0	0 204 188	395 0 50	0 0 0 0

Major Street Volume: 686

Minor Approach Volume: 445

Minor Approach Volume Threshold: 536

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Scenario Report

Scenario: EPAP + Proj AM
 Command: EPAP + Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / No
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	No / No

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 103 1	484 106 0	0 0 0 0	14 0 298
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	12.0

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.0]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=312]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1006]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 103 1	484 106 0	0 0 0 0	14 0 298
Major Street Volume:	694			
Minor Approach Volume:	312			
Minor Approach Volume Threshold:	407			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	152 197 0	0 301 233	196 0 50	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	43.1	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=2.9]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=246]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1129]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	152 197 0	0 301 233	196 0 50	0 0 0 0

Major Street Volume: 883

Minor Approach Volume: 246

Minor Approach Volume Threshold: 428

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Scenario Report

Scenario: EPAP + Proj PM
 Command: EPAP + Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / No
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	Yes / No

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Initial Vol, and ApproachDel.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=361]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1052]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Initial Vol, and ApproachDel.

Major Street Volume: 691
Minor Approach Volume: 361
Minor Approach Volume Threshold: 409

SIGNAL WARRANT DISCLAIMER
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Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	60 234 0	0 205 189	415 0 50	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	74.1	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=9.6]

SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=465]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1153]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	60 234 0	0 205 189	415 0 50	0 0 0 0
Major Street Volume:	688			
Minor Approach Volume:	465			
Minor Approach Volume Threshold:	535			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Scenario Report

Scenario: Exist AM Pk Hr

Command: Exist AM Pk Hr

Volume: Exist AM Pk Hr

Geometry: Existing

Impact Fee: Default Impact Fee

Trip Generation: AM Pk Hr

Trip Distribution: Existing

Paths: Phase 1

Routes: Default Route

Configuration: Default Configuration

Existing Conditions AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	Yes	???
# 13 Eight Mile & SR 99 E Frontage	Yes	???
# 14 SR99 W Frontage & 99 SB Ramps	No / Yes	??? / ???
# 15 SR99 E Frontage & 99 NB Ramps	No / No	??? / ???

Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	155 23 167	12 25 8	6 315 249	136 327 13
Major Street Volume:	1046			
Minor Approach Volume:	345			
Minor Approach Volume Threshold:	143			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	177 38 28	4 34 57	26 119 369	74 262 8
Major Street Volume:	858			
Minor Approach Volume:	243			
Minor Approach Volume Threshold:	203			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	303 109 0	0 0 0 0	15 0 252
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	11.3

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.8]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=267]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=814]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	303 109 0	0 0 0 0	15 0 252

Major Street Volume: 547

Minor Approach Volume: 267

Minor Approach Volume Threshold: 260

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 196 0	0 235 236	140 0 37	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	21.6	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.1]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=177]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=977]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 196 0	0 235 236	140 0 37	0 0 0 0
Major Street Volume:		800		
Minor Approach Volume:		177		
Minor Approach Volume Threshold:		224		

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Scenario Report

Scenario: Exist + Ph 1 AM

Command: Exist + Ph 1 AM

Volume: Exist AM Pk Hr

Geometry: Existing

Impact Fee: Default Impact Fee

Trip Generation: AM Pk Hr

Trip Distribution: Existing

Paths: Phase 1

Routes: Default Route

Configuration: Default Configuration

Existing Plus Phase 1 AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	???	Yes
# 13 Eight Mile & SR 99 E Frontage	???	Yes
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / Yes
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	No / No

Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	155 23 167	12 25 8	6 316 251	136 333 13
Major Street Volume:	1055			
Minor Approach Volume:	345			
Minor Approach Volume Threshold:	141			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	183 38 28	4 34 57	26 119 369	74 263 8
Major Street Volume:	859			
Minor Approach Volume:	249			
Minor Approach Volume Threshold:	203			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	305 109 0	0 0 0 0	15 0 252
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	11.3

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.8]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=267]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=816]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	305 109 0	0 0 0 0	15 0 252

Major Street Volume: 549

Minor Approach Volume: 267

Minor Approach Volume Threshold: 259

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 196 0	0 235 236	145 0 37	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	22.1	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.1]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=182]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=982]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 196 0	0 235 236	145 0 37	0 0 0 0
Major Street Volume:	800			
Minor Approach Volume:	182			
Minor Approach Volume Threshold:	224			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Scenario Report

Scenario: Exist + Ph 1 PM

Command: Exist + Ph 1 PM

Volume: Exist PM Pk Hr

Geometry: Existing

Impact Fee: Default Impact Fee

Trip Generation: PM Pk Hr

Trip Distribution: Existing

Paths: Phase 1

Routes: Default Route

Configuration: Default Configuration

Existing Plus Phase 1 PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	???	Yes
# 13 Eight Mile & SR 99 E Frontage	???	Yes
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / No
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	No / No

Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	193 18 145	19 47 10	3 343 223	106 421 19
Major Street Volume:	1115			
Minor Approach Volume:	356			
Minor Approach Volume Threshold:	124			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	328 55 86	10 34 54	25 235 270	53 216 8
Major Street Volume:	807			
Minor Approach Volume:	469			
Minor Approach Volume Threshold:	221			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	184 149 0	0 0 0 0	23 0 270
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	10.9

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.9]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=293]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=734]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	184 149 0	0 0 0 0	23 0 270
Major Street Volume:		441		
Minor Approach Volume:		293		
Minor Approach Volume Threshold:		306		

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 160 0	0 194 149	242 0 55	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	21.9	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.8]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=297]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=893]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 160 0	0 194 149	242 0 55	0 0 0 0

Major Street Volume: 596

Minor Approach Volume: 297

Minor Approach Volume Threshold: 313

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Scenario Report

Scenario: Exist PM Pk Hr

Command: Exist PM Pk Hr

Volume: Exist PM Pk Hr

Geometry: Existing

Impact Fee: Default Impact Fee

Trip Generation: PM Pk Hr

Trip Distribution: Existing

Paths: Phase 1

Routes: Default Route

Configuration: Default Configuration

Existing Conditions PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	Yes	???
# 13 Eight Mile & SR 99 E Frontage	Yes	???
# 14 SR99 W Frontage & 99 SB Ramps	No / No	??? / ???
# 15 SR99 E Frontage & 99 NB Ramps	No / No	??? / ???

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	193 18 145	19 47 10	3 342 218	106 418 19
Major Street Volume:	1106			
Minor Approach Volume:	356			
Minor Approach Volume Threshold:	126			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	325 55 86	10 34 54	25 234 269	53 216 8
Major Street Volume:	805			
Minor Approach Volume:	466			
Minor Approach Volume Threshold:	222			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	179 149 0	0 0 0 0	23 0 270
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	10.9

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.9]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=293]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=729]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	179 149 0	0 0 0 0	23 0 270

Major Street Volume: 436

Minor Approach Volume: 293

Minor Approach Volume Threshold: 308

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 160 0	0 193 149	239 0 55	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	21.6	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.8]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=294]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=889]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 160 0	0 193 149	239 0 55	0 0 0 0

Major Street Volume: 595

Minor Approach Volume: 294

Minor Approach Volume Threshold: 313

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Scenario Report

Scenario: Exist + Proj AM
 Command: Exist + Proj AM
 Volume: Exist AM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: Existing
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Proposed Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	???	Yes
# 13 Eight Mile & SR 99 E Frontage	???	Yes
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / Yes
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	No / Yes

Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	156 23 167	12 25 8	6 319 269	136 392 13
Major Street Volume:	1135			
Minor Approach Volume:	346			
Minor Approach Volume Threshold:	119			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	236 38 28	4 34 58	26 121 371	74 267 8
Major Street Volume:	867			
Minor Approach Volume:	302			
Minor Approach Volume Threshold:	200			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	323 109 0	0 0 0 0	15 0 253
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	11.4

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.8]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=268]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=835]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 129 6	323 109 0	0 0 0 0	15 0 253

Major Street Volume: 567

Minor Approach Volume: 268

Minor Approach Volume Threshold: 252

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 201 0	0 237 236	194 0 37	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	29.8	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.9]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=231]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1038]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	133 201 0	0 237 236	194 0 37	0 0 0 0
Major Street Volume:		807		
Minor Approach Volume:		231		
Minor Approach Volume Threshold:		221		

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Scenario Report

Scenario: Exist + Proj PM

Command: Exist + Proj PM

Volume: Exist PM Pk Hr

Geometry: Existing

Impact Fee: Default Impact Fee

Trip Generation: PM Pk Hr

Trip Distribution: Existing

Paths: Nr-Term Build-out

Routes: Default Route

Configuration: Default Configuration

Existing Plus Proposed Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 12 Eight Mile & SR 99 W Frontage	???	Yes
# 13 Eight Mile & SR 99 E Frontage	???	Yes
# 14 SR99 W Frontage & 99 SB Ramps	??? / ???	No / Yes
# 15 SR99 E Frontage & 99 NB Ramps	??? / ???	No / Yes

Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Eight Mile & SR 99 W Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 0 0	0 1 0 0 1	0 1 0 0 1
Initial Vol:	193 18 145	19 47 10	3 356 278	106 449 19
Major Street Volume:	1211			
Minor Approach Volume:	356			
Minor Approach Volume Threshold:	99 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Eight Mile & SR 99 E Frontage

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 0 1 0 0
Initial Vol:	353 55 86	10 34 54	26 240 276	53 219 8
Major Street Volume:	822			
Minor Approach Volume:	494			
Minor Approach Volume Threshold:	216			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	239 149 0	0 0 0 0	23 0 270
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	11.2

Approach[westbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.9]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=293]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=789]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 SR99 W Frontage & 99 SB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 101 7	239 149 0	0 0 0 0	23 0 270
Major Street Volume:	496			
Minor Approach Volume:	293			
Minor Approach Volume Threshold:	281			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 162 0	0 199 150	265 0 55	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	24.9	xxxxxx

Approach[eastbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=2.2]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=320]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=924]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 SR99 E Frontage & 99 NB Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
Initial Vol:	93 162 0	0 199 150	265 0 55	0 0 0 0

Major Street Volume: 604

Minor Approach Volume: 320

Minor Approach Volume Threshold: 309

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

 Cumulative No Project AM Peak Hour

Scenario Report

Scenario: Cumul No Proj AM
 Command: Cumul No Proj AM
 Volume: Cumul AM Pk Hr
 Geometry: Cumulative
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: Cumulative
 Paths: Cumul Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Cumulative No Project AM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	LOS	Veh C	LOS	Veh C	
# 3 Eight Mile Rd & Davis Rd	C	27.7 0.539	C	27.7 0.539	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	C	28.5 0.557	C	28.5 0.557	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	27.2 0.511	C	27.2 0.511	+ 0.000 D/V
# 6 West Lane & Ham Lane	B	11.8 0.221	B	11.8 0.221	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	C	30.6 0.623	C	30.6 0.623	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	33.5 0.671	C	33.5 0.671	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	A	5.4 0.208	A	5.4 0.208	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	C	20.6 0.354	C	20.6 0.354	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	C	29.9 0.625	C	29.9 0.625	+ 0.000 D/V
# 12 Eight Mile & SR 99 W Frontage	C	29.1 0.773	C	29.1 0.773	+ 0.000 D/V
# 13 Eight Mile & SR 99 E Frontage	C	23.1 0.429	C	23.1 0.429	+ 0.000 D/V
# 20 West Lane & Tra Vigne Road B	C	28.2 0.609	C	28.2 0.609	+ 0.000 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	16.8 0.369	B	16.8 0.369	+ 0.000 D/V

Cumulative No Project AM Peak Hour

Intersection	Signal Warrant Summary Report	Future Met
	Base Met	[Del / Vol]
	[Del / Vol]	

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

 Intersection #3 Eight Mile Rd & Davis Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.539
 Loss Time (sec): 12 Average Delay (sec/veh): 27.7
 Optimal Cycle: 43 Level Of Service: C

Street Name:	Davis Road			Eight Mile Road		
Approach:	North Bound	South Bound	East Bound	West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected	Protected	Protected		
Rights:	Include	Include	Include	Include		
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0
Lanes:	1 0 2 0 1	1 0 2 0 1	1 0 2 0 1	1 0 2 0 1	1 0 1 1 0	

Volume Module:AM Peak Hour

Base Vol:	23 159 231	56 180 40	58 584 11	166 510 57
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	23 159 231	56 180 40	58 584 11	166 510 57
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.92 0.92 0.92	0.92 0.92 0.92	0.92 0.92 0.92	0.92 0.92 0.92
PHF Volume:	25 173 251	61 196 43	63 635 12	180 554 62
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	25 173 251	61 196 43	63 635 12	180 554 62
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	25 173 251	61 196 43	63 635 12	180 554 62

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.93 0.93 0.83	0.93 0.93 0.83	0.93 0.93 0.83	0.93 0.92 0.92
Lanes:	1.00 2.00 1.00	1.00 2.00 1.00	1.00 2.00 1.00	1.00 1.80 0.20
Final Sat.:	1769 3538 1583	1769 3538 1583	1769 3538 1583	1769 3134 350

Capacity Analysis Module:

Vol/Sat:	0.01 0.05 0.16	0.03 0.06 0.03	0.04 0.18 0.01	0.10 0.18 0.18
Crit Moves:	****	****	****	****
Green/Cycle:	0.07 0.29 0.29	0.06 0.29 0.29	0.09 0.33 0.33	0.19 0.43 0.43
Volume/Cap:	0.19 0.17 0.54	0.54 0.19 0.10	0.41 0.54 0.02	0.54 0.41 0.41
Delay/Veh:	44.3 26.3 30.9	50.5 27.1 26.4	44.9 27.6 22.4	38.4 19.6 19.6
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	44.3 26.3 30.9	50.5 27.1 26.4	44.9 27.6 22.4	38.4 19.6 19.6
LOS by Move:	D C C	D C C	D C C	D B B
HCM2k95thQ:	45 94 312	133 109 46	115 374 11	265 273 273

 Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.557
 Loss Time (sec): 12 Average Delay (sec/veh): 28.5
 Optimal Cycle: 45 Level Of Service: C

Street Name: Lower Sacramento Road Eight Mile Road West Bound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Protected Protected
 Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0

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Volume Module:AM Peak Hour

Base Vol:	241	454	241	2	634	99	139	494	142	212	434	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	241	454	241	2	634	99	139	494	142	212	434	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	262	493	262	2	689	108	151	537	154	230	472	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	493	262	2	689	108	151	537	154	230	472	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	262	493	262	2	689	108	151	537	154	230	472	5

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.93
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.98	0.02
Final Sat.:	3432	3538	1583	3432	3538	1583	3432	3538	1583	3432	3491	40

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Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.17	0.00	0.19	0.07	0.04	0.15	0.10	0.07	0.14	0.14
Crit Moves:	****			****			****			****		
Green/Cycle:	0.14	0.49	0.49	0.00	0.35	0.35	0.10	0.27	0.27	0.12	0.30	0.30
Volume/Cap:	0.56	0.29	0.34	0.34	0.56	0.19	0.46	0.56	0.36	0.56	0.46	0.46
Delay/Veh:	41.8	15.5	16.2	79.2	26.8	22.9	43.7	31.9	29.8	43.1	28.9	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.8	15.5	16.2	79.2	26.8	22.9	43.7	31.9	29.8	43.1	28.9	28.9
LOS by Move:	D	B	B	E	C	C	D	C	C	D	C	C
HCM2k95thQ:	225	176	189	15	397	102	140	354	183	207	288	288

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Base Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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HCM Ops Adjusted Lane Utilization Module:

Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0

Lane Group: L T R L T R L T R L RT RT

#LnsInGrps: 2 2 1 2 2 1 2 2 1 2 2 2

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HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12

CrsswalkWid: 8 8 8 8 8 8 8 8

% Hev Veh: 2 2 2 2 2 2 2 2

Grade: 0% 0% 0% 0% 0% 0% 0% 0%

Parking/Hr: No No No No

Bus Stp/Hr: 0 0 0 0

Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > > >

>

Cnft Ped/Hr: 0 0 0 0

ExclusivERT: Include Include Include Include

% RT Prtct: 0 0 0 0

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HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

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HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00

Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00

Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 1.00 1.00

LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx

PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98

Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Sat Adj: 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 0.95

Fnl Sat Adj: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.93

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Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > > >

>

Signal Type: < < < < < < < < < < < Actuated > > > > > > > > > > > > > >

>

DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.511
Loss Time (sec): 12 Average Delay (sec/veh): 27.2
Optimal Cycle: 41 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap. (X): 0.221
Loss Time (sec): 9 Average Delay (sec/veh): 11.8
Optimal Cycle: 23 Level Of Service: B

Street Name: Ham Lane West Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module: AM Peak Hour
Base Vol: 32 5 35 1 11 21 5 377 0 31 476 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 32 5 35 1 11 21 5 377 0 31 476 1
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 35 5 38 1 12 23 5 410 0 34 517 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 35 5 38 1 12 23 5 410 0 34 517 1
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 35 5 38 1 12 23 5 410 0 34 517 1

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.93 0.95 0.93 0.93 0.93
Lanes: 0.44 0.07 0.49 0.03 0.33 0.64 1.00 2.00 0.00 1.00 1.99 0.01
Final Sat.: 680 106 744 51 565 1079 1769 3538 0 1769 3530 7

Capacity Analysis Module:
Vol/Sat: 0.05 0.05 0.05 0.02 0.02 0.02 0.00 0.12 0.00 0.02 0.15 0.15
Crit Moves: ****
Green/Cycle: 0.23 0.23 0.23 0.23 0.23 0.23 0.01 0.58 0.00 0.10 0.66 0.66
Volume/Cap: 0.22 0.22 0.22 0.09 0.09 0.09 0.22 0.20 0.00 0.20 0.22 0.22
Delay/Veh: 31.4 31.4 31.4 30.2 30.2 30.2 53.3 9.9 0.0 42.3 6.7 6.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 31.4 31.4 31.4 30.2 30.2 30.2 53.3 9.9 0.0 42.3 6.7 6.7
LOS by Move: C C C C C D A A D A A
HCM2k95thQ: 97 97 97 42 42 42 21 94 0 56 70 70

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 1 0 0 0 0 1 0 1 1 0 1 0 1 1 0
Lane Group: LTR LTR LTR LTR LTR LTR L RT RT L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 2 2 1 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 5 5 5 5 5 5 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: 0.93 0.93 0.93 0.91 0.91 0.91 0.93 0.93 0.93 0.93 0.93 0.93
LT Adj: 0.88 0.88 0.88 1.00 1.00 1.00 0.95 0.95 0.95 0.95 0.95 0.95
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.98 1.00 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
Fnl Sat Adj: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.93 0.95 0.93 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and movement sub-columns (L, T, R). Rows include Intersection #6 West Lane & Ham Lane, Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.623
Loss Time (sec): 12 Average Delay (sec/veh): 30.6
Optimal Cycle: 50 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows for West Lane, South Bound, East Bound, West Bound.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows for West Lane, South Bound, East Bound, West Bound.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows for West Lane, South Bound, East Bound, West Bound.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, Movement, HCM Ops Adjusted Lane Utilization Module. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns: HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns: HCM Ops f(lt) Adj Case Module, f(lt) Case. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns: HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns: Delay Adjustment Factor Module, Coordinated, Signal Type. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns: DelAdjFctr. Rows for North Bound, South Bound, East Bound, West Bound.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 West Lane & Morada Lane

Table with columns for Street Name (West Lane, Morada Lane) and Movement (L, T, R). Rows include Cycle, Loss Time, Optimal Cycle, Critical Vol./Cap, Average Delay, Level Of Service, Control, Rights, Min. Green, Y+R, Lanes, Volume Module (AM Peak Hour), Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.208
Loss Time (sec): 9 Average Delay (sec/veh): 5.4
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name (Ham Lane, Eight Mile Road, West Bound), Approach (North Bound, South Bound, East Bound), Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), and Min. Green values.

Volume Module: AM Peak Hour. Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume for various movements.

Saturation Flow Module. Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module. Table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ values.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table showing HCM Ops Adjusted Lane Utilization Module with columns for Lane Group, #LnsInGrps, and values for North, South, East, and West Bound movements.

Table showing HCM Ops Input Saturation Adj Module with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, and ExclusivERT values.

Table showing HCM Ops f(lt) Adj Case Module with columns for f(lt) Case and values for North, South, East, and West Bound movements.

Table showing HCM Ops Saturation Adj Module with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, and Mlf Sat Adj values.

Table showing Delay Adjustment Factor Module with columns for Coordinated and Signal Type values.

Table showing DelAdjFctr values for different movements.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #10 Eight Mile Road & Leach Road, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 0 1 0 1 0 2 1 0 1 0 2 1 0
Lane Group: L T R L RT RT L RT RT L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 1 3 3 1 3 3

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0 0 0 0 0 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx 0.88 0.88 xxxx 1.00 1.00 xxxx 0.99 0.99
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.86 0.86 0.93 0.98 0.98 0.93 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 0.91 1.00 0.91 0.91
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.86 0.86 0.93 0.89 0.89 0.93 0.88 0.88

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Green/Cycle: 0.22 0.15 0.15 0.14 0.07 0.07 0.18 0.54 0.54 0.05 0.41 0.41
ArrivalType: 4 4 4 4 4 4
ProgFactor: 0.92 0.94 0.96 0.96 0.98 0.98 0.95 0.66 0.66 0.99 0.81 0.81
Q1: 1.8 0.1 2.0 2.2 0.7 0.7 2.4 3.7 3.7 0.8 3.8 3.8
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.21 0.21 0.21 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.99 0.99 0.99 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 0.37 0.73 0.73 1.00 1.00 1.00
Q2: 0.3 0.0 0.5 0.5 0.3 0.3 0.2 0.4 0.4 0.5 0.5 0.5
HCM2KQueue: 2.1 0.1 2.5 2.7 0.9 0.9 2.6 4.1 4.1 1.3 4.2 4.2

70th%Factor: 1.19 1.20 1.19 1.19 1.20 1.20 1.19 1.19 1.19 1.20 1.19 1.19
HCM2k70thQ: 2.5 0.2 3.0 3.2 1.1 1.1 3.1 4.9 4.9 1.5 5.0 5.0

85th%Factor: 1.58 1.60 1.58 1.57 1.59 1.59 1.58 1.56 1.56 1.59 1.56 1.56
HCM2k85thQ: 3.2 0.2 4.0 4.3 1.5 1.5 4.0 6.4 6.4 2.0 6.6 6.6

90th%Factor: 1.76 1.80 1.75 1.75 1.78 1.78 1.75 1.73 1.73 1.78 1.72 1.72
HCM2k90thQ: 3.6 0.3 4.4 4.7 1.7 1.7 4.5 7.1 7.1 2.2 7.3 7.3

95th%Factor: 2.04 2.10 2.02 2.02 2.07 2.07 2.02 1.98 1.98 2.06 1.97 1.97
HCM2k95thQ: 4.2 0.3 5.1 5.5 1.9 1.9 5.2 8.1 8.1 2.6 8.4 8.4

98th%Factor: 2.55 2.69 2.52 2.51 2.63 2.63 2.52 2.43 2.43 2.61 2.42 2.42
HCM2k98thQ: 5.2 0.4 6.4 6.8 2.5 2.5 6.5 9.9 9.9 3.3 10.3 10.3

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 Eight Mile & SR 99 W Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.773
Loss Time (sec): 12 Average Delay (sec/veh): 29.1
Optimal Cycle: 71 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes and rows for SR 99 West Frontage Road and Eight Mile Road.

Table with columns for Volume Module: AM Peak Hour and rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. and rows for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ and rows for Capacity Analysis Module.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, HCM2k98thQ.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #13 Eight Mile & SR 99 E Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.429
Loss Time (sec): 12 Average Delay (sec/veh): 23.1
Optimal Cycle: 37 Level Of Service: C

Street Name: SR 99 East Frontage Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0

Volume Module:AM Peak Hour

Base Vol: 147 13 56 2 13 10 3 94 277 135 207 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 147 13 56 2 13 10 3 94 277 135 207 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 160 14 61 2 14 11 3 102 301 147 225 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 160 14 61 2 14 11 3 102 301 147 225 3
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 160 14 61 2 14 11 3 102 301 147 225 3

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93
Lanes: 1.00 0.19 0.81 1.00 0.57 0.43 1.00 2.00 1.00 1.00 1.97 0.03
Final Sat.: 1769 308 1327 1769 984 757 1769 3538 1583 1769 3480 50

Capacity Analysis Module:

Vol/Sat: 0.09 0.05 0.05 0.00 0.01 0.01 0.00 0.03 0.19 0.08 0.06 0.06
Crit Moves: ****
Green/Cycle: 0.21 0.24 0.24 0.01 0.03 0.03 0.02 0.44 0.44 0.19 0.62 0.62
Volume/Cap: 0.43 0.19 0.19 0.19 0.43 0.43 0.10 0.07 0.43 0.43 0.10 0.10
Delay/Veh: 35.1 30.7 30.7 57.7 52.4 52.4 49.8 16.0 19.6 36.4 7.8 7.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.1 30.7 30.7 57.7 52.4 52.4 49.8 16.0 19.6 36.4 7.8 7.8
LOS by Move: D C C E D D D B B D A A
HCM2k95thQ: 215 90 90 14 68 68 5 35 246 204 39 39

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Base Volume Alternative

Intersection #13 Eight Mile & SR 99 E Frontage

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 2 0 1 1 0 1 1 0
Lane Group: L RT RT L RT RT L T R L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 2 1 1 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < < Other > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx 0.88 0.88 xxxx 0.94 0.94 xxxx xxxx 0.85 xxxx 1.00 1.00
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.98 0.83 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 0.95
Fnl Sat Adj: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < < < No > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >

DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, North Bound, South Bound, East Bound, West Bound, and Movement. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #20 West Lane & Tra Vigne Road B. Includes Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap.(X), Average Delay (sec/veh), Level Of Service, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, HCM2k98thQ.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project AM Peak Hour

Base Queue Length Report (feet)

Table with columns for Node Intersection, Northbound, Southbound, Eastbound, Westbound, and sub-columns for L, T, R directions.

 Cumulative No Project PM Peak Hour

Scenario Report

Scenario: Cumul No Proj PM
 Command: Cumul No Proj PM
 Volume: Cumul PM Pk Hr
 Geometry: Cumulative
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: Cumulative
 Paths: Cumul Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Cumulative No Project PM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	25.1 0.538	C	25.1 0.538	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	C	28.3 0.528	C	28.3 0.528	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	27.9 0.597	C	27.9 0.597	+ 0.000 D/V
# 6 West Lane & Ham Lane	A	7.7 0.236	A	7.7 0.236	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	C	28.0 0.538	C	28.0 0.538	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	34.1 0.701	C	34.1 0.701	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	A	3.8 0.238	A	3.8 0.238	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	C	22.1 0.406	C	22.1 0.406	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	C	33.2 0.770	C	33.2 0.770	+ 0.000 D/V
# 12 Eight Mile & SR 99 W Frontage	C	28.2 0.717	C	28.2 0.717	+ 0.000 D/V
# 13 Eight Mile & SR 99 E Frontage	C	24.7 0.419	C	24.7 0.419	+ 0.000 D/V
# 20 West Lane & Tra Vigne Road B	C	28.2 0.519	C	28.2 0.519	+ 0.000 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	17.3 0.383	B	17.3 0.383	+ 0.000 D/V

Cumulative No Project PM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met		
	[Del / Vol]		

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

 Intersection #3 Eight Mile Rd & Davis Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.538
Loss Time (sec):	12	Average Delay (sec/veh):	25.1
Optimal Cycle:	43	Level Of Service:	C

Street Name:	Davis Road			Eight Mile Road		
	North Bound	South Bound	East Bound	West Bound		
Approach:						
Movement:	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected	Protected	Protected		
Rights:	Include	Include	Include	Include		
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0
Lanes:	1 0 2 0 1	1 0 2 0 1	1 0 2 0 1	1 0 1 1 0		

Volume Module:PM Peak Hour

Base Vol:	9 116 135	88 131 36	45 686 20	188 679 50
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	9 116 135	88 131 36	45 686 20	188 679 50
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.92 0.92 0.92	0.92 0.92 0.92	0.92 0.92 0.92	0.92 0.92 0.92
PHF Volume:	10 126 147	96 142 39	49 746 22	204 738 54
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	10 126 147	96 142 39	49 746 22	204 738 54
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	10 126 147	96 142 39	49 746 22	204 738 54

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.93 0.93 0.83	0.93 0.93 0.83	0.93 0.93 0.83	0.93 0.92 0.92
Lanes:	1.00 2.00 1.00	1.00 2.00 1.00	1.00 2.00 1.00	1.00 1.86 0.14
Final Sat.:	1769 3538 1583	1769 3538 1583	1769 3538 1583	1769 3262 240

Capacity Analysis Module:

Vol/Sat:	0.01 0.04 0.09	0.05 0.04 0.02	0.03 0.21 0.01	0.12 0.23 0.23
Crit Moves:	****	****	****	****
Green/Cycle:	0.03 0.17 0.17	0.10 0.24 0.24	0.07 0.39 0.39	0.21 0.54 0.54
Volume/Cap:	0.17 0.21 0.54	0.54 0.17 0.10	0.42 0.54 0.04	0.54 0.42 0.42
Delay/Veh:	48.4 35.7 39.9	46.0 30.2 29.7	47.3 23.8 18.8	36.4 13.8 13.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	48.4 35.7 39.9	46.0 30.2 29.7	47.3 23.8 18.8	36.4 13.8 13.8
LOS by Move:	D D D	D C C	D C B	D B B
HCM2k95thQ:	24 89 229	176 87 46	100 393 17	285 260 260

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

```

*****
Intersection #3 Eight Mile Rd & Davis Rd
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         1 0 2 0 1      1 0 2 0 1      1 0 2 0 1      1 0 1 1 0
Lane Group:    L  T  R      L  T  R      L  T  R      L  RT  RT
#LnsInGrps:   1  2  1      1  2  1      1  2  1      1  2  2
-----|-----|-----|-----|
HCM Ops Input Saturation Adj Module:
Lane Width:   12  12  12      12  12  12      12  12  12      12  12  12
CrsswalkWid: 8              8              8              8
% Hev Veh:    2              2              2              2
Grade:        0%          0%          0%          0%
Parking/Hr:   No          No          No          No
Bus Stp/Hr:   0            0            0            0
Area Type:    < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr:  0              0              0              0
ExclusiveRT: Include      Include      Include      Include
% RT Prtct:  0              0              0              0
-----|-----|-----|-----|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:   1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx
-----|-----|-----|-----|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99
LT Adj:      0.95 xxxx xxxxxx  0.95 xxxx xxxxxx  0.95 xxxx xxxxxx  0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.97  0.97
Usr Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  0.95
Fnl Sat Adj: 0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.92  0.92
-----|-----|-----|-----|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type:  < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
*****
    
```

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

```

*****
Intersection #3 Eight Mile Rd & Davis Rd
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Green/Cycle:  0.03 0.17  0.17  0.10 0.24  0.24  0.07 0.39  0.39  0.21 0.54  0.54
ArrivalType:  4              4              4              4
ProgFactor:   0.99 0.94  0.96  0.98 0.91  0.90  0.99 0.86  0.79  0.95 0.67  0.67
Q1:           0.3  1.5  3.6  2.5  1.5  0.8  1.3  7.2  0.3  4.8  4.6  4.6
UpstreamVC:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.2  0.3  1.1  1.1  0.2  0.1  0.7  1.1  0.0  1.1  0.7  0.7
HCM2KQueue:   0.5  1.7  4.7  3.5  1.7  0.9  2.0  8.4  0.3  5.9  5.3  5.3
-----|-----|-----|-----|
70th%Factor:  1.20 1.20  1.19  1.19 1.20  1.20  1.20 1.18  1.20  1.19 1.19  1.19
HCM2k70thQ:   0.5  2.1  5.6  4.2  2.0  1.1  2.3  9.9  0.4  7.0  6.3  6.3
-----|-----|-----|-----|
85th%Factor:  1.60 1.58  1.56  1.57 1.58  1.59  1.58 1.53  1.60  1.55 1.55  1.55
HCM2k85thQ:   0.7  2.8  7.3  5.5  2.7  1.4  3.1 12.8  0.5  9.1  8.3  8.3
-----|-----|-----|-----|
90th%Factor:  1.79 1.77  1.72  1.74 1.77  1.78  1.76 1.66  1.79  1.70 1.71  1.71
HCM2k90thQ:   0.8  3.1  8.0  6.1  3.0  1.6  3.4 13.9  0.6  10.0  9.1  9.1
-----|-----|-----|-----|
95th%Factor:  2.08 2.04  1.96  1.99 2.05  2.07  2.04 1.88  2.09  1.93 1.95  1.95
HCM2k95thQ:   1.0  3.6  9.2  7.0  3.5  1.8  4.0 15.7  0.7  11.4 10.4  10.4
-----|-----|-----|-----|
98th%Factor:  2.67 2.57  2.40  2.46 2.58  2.63  2.56 2.23  2.67  2.34 2.36  2.36
HCM2k98thQ:   1.2  4.5 11.2  8.7  4.4  2.3  5.0 18.6  0.9  13.8 12.6  12.6
    
```


Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #5 West Lane & Armstrong Road showing Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, etc.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1 1 0 1 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 1 2 1 1 2 1 1 1 1 1 1 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < Other > > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 0.95 1.00 1.00 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.93 0.83 0.93 0.93 0.83 0.93 0.93 0.83 0.93 0.98 0.83
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < No > > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.00 0.27 0.27 0.20 0.47 0.47 0.05 0.22 0.22 0.18 0.36 0.36
ArrivalType: 4 4 4
ProgFactor: 1.00 0.94 0.88 0.96 0.74 0.71 0.99 0.92 0.91 0.94 0.86 0.90
Q1: 0.1 6.9 0.6 5.2 3.2 0.7 1.3 1.6 0.1 1.4 4.9 6.9
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 0.3 1.4 0.1 1.4 0.4 0.1 1.2 0.2 0.0 0.2 0.7 1.4
HCM2KQueue: 0.3 8.3 0.6 6.5 3.6 0.8 2.5 1.9 0.1 1.6 5.6 8.3
70th%Factor: 1.20 1.18 1.20 1.18 1.19 1.20 1.19 1.20 1.20 1.20 1.19 1.18
HCM2k70thQ: 0.4 9.8 0.8 7.7 4.3 0.9 3.0 2.2 0.1 1.9 6.7 9.8
85th%Factor: 1.60 1.53 1.59 1.54 1.57 1.59 1.58 1.58 1.60 1.58 1.55 1.53
HCM2k85thQ: 0.6 12.6 1.0 10.1 5.7 1.2 3.9 2.9 0.1 2.5 8.7 12.6
90th%Factor: 1.79 1.66 1.79 1.69 1.73 1.79 1.75 1.76 1.80 1.77 1.70 1.66
HCM2k90thQ: 0.6 13.8 1.2 11.0 6.3 1.3 4.3 3.3 0.1 2.8 9.5 13.8
95th%Factor: 2.09 1.88 2.08 1.92 1.99 2.08 2.02 2.04 2.10 2.05 1.94 1.88
HCM2k95thQ: 0.7 15.5 1.3 12.5 7.2 1.6 5.0 3.8 0.2 3.3 10.9 15.5
98th%Factor: 2.67 2.23 2.65 2.31 2.46 2.64 2.53 2.57 2.69 2.58 2.35 2.23
HCM2k98thQ: 0.9 18.4 1.7 15.0 8.9 2.0 6.3 4.8 0.2 4.1 13.2 18.4

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 West Lane & Ham Lane

 Cycle (sec): 100 Critical Vol./Cap.(X): 0.236
 Loss Time (sec): 9 Average Delay (sec/veh): 7.7
 Optimal Cycle: 24 Level Of Service: A

Street Name: Ham Lane West Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
 Lanes: 0 0 0 1 0 0 0 1 1 0 1 0
 -----|-----|-----|-----|
Volume Module:PM Peak Hour
 Base Vol: 0 5 41 5 2 2 6 534 1 32 446 13
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 5 41 5 2 2 6 534 1 32 446 13
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 0 5 45 5 2 2 7 580 1 35 485 14
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 0 5 45 5 2 2 7 580 1 35 485 14
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 0 5 45 5 2 2 7 580 1 35 485 14
 -----|-----|-----|-----|
Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 1.00 0.86 0.86 0.85 0.85 0.85 0.93 0.93 0.93 0.93 0.93
 Lanes: 0.00 0.11 0.89 0.56 0.22 0.22 1.00 1.99 0.01 1.00 1.94 0.06
 Final Sat.: 0 178 1460 894 358 358 1769 3531 7 1769 3424 100
 -----|-----|-----|-----|
Capacity Analysis Module:
 Vol/Sat: 0.00 0.03 0.03 0.01 0.01 0.01 0.00 0.16 0.16 0.02 0.14 0.14
 Crit Moves: **** **** ****
 Green/Cycle: 0.00 0.13 0.13 0.13 0.13 0.13 0.02 0.70 0.70 0.08 0.76 0.76
 Volume/Cap: 0.00 0.24 0.24 0.05 0.05 0.05 0.19 0.24 0.24 0.24 0.19 0.19
 Delay/Veh: 0.0 39.7 39.7 38.2 38.2 38.2 50.8 5.5 5.5 43.7 3.4 3.4
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.0 39.7 39.7 38.2 38.2 38.2 50.8 5.5 5.5 43.7 3.4 3.4
 LOS by Move: A D D D D D D A A D A A
 HCM2k95thQ: 0 77 77 14 14 14 20 56 56 61 12 12

 Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
HCM Ops Adjusted Lane Utilization Module:
 Lanes: 0 0 0 1 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
 Lane Group: xxxx RT RT LTR LTR LTR L RT RT L RT RT
 #LnsInGrps: 0 1 1 1 1 1 1 2 2 1 2 2
 -----|-----|-----|-----|
HCM Ops Input Saturation Adj Module:
 Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
 CrsswalkWid: 8 8 8 8 8 8
 % Hev Veh: 2 2 2 2
 Grade: 0% 0% 0% 0%
 Parking/Hr: No No No No
 Bus Stp/Hr: 0 0 0 0
 Area Type: < < < < < < < < < < < Other > > > > > > > > > > > >
 Cnft Ped/Hr: 0 0 0 0
 ExclusivERT: Include Include Include Include
 % RT Prtct: 0 0 0 0
 -----|-----|-----|-----|
HCM Ops f(lt) Adj Case Module:
 f(lt) Case: xxxx xxxx xxxx 5 5 5 1 xxxx xxxx 1 xxxx xxxx
 -----|-----|-----|-----|
HCM Ops Saturation Adj Module:
 Ln Wid Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Hev Veh Adj: xxxx 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 Grade Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Parking Adj: xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
 Bus Stp Adj: xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
 Area Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 RT Adj: xxxx 0.88 0.88 0.97 0.97 0.97 xxxx 1.00 1.00 xxxx 1.00 1.00
 LT Adj: xxxx xxxx xxxxxx 0.89 0.89 0.89 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 HCM Sat Adj: 1.00 0.86 0.86 0.85 0.85 0.85 0.93 0.98 0.98 0.93 0.98 0.98
 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
 Fnl Sat Adj: 1.00 0.86 0.86 0.85 0.85 0.85 0.93 0.93 0.93 0.93 0.93 0.93
 -----|-----|-----|-----|
Delay Adjustment Factor Module:
 Coordinated: < < < < < < < < < < < No > > > > > > > > > > > >
 >
 Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > >
 >
 DelAdjPctr: 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 12 Average Delay (sec/veh): 28.0
Optimal Cycle: 43 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane and East Bound data.

Volume Module: PM Peak Hour

Table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns: HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps, HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns: f(lt) Case, HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns: Coordinated, Signal Type, DelAdjFctr.

DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, Q2, HCM2KQueue, HCM2k70thQ, HCM2k85thQ, HCM2k90thQ, HCM2k95thQ, HCM2k98thQ, and various Factor values.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.238
Loss Time (sec): 9 Average Delay (sec/veh): 3.8
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for North Bound, South Bound, East Bound, West Bound.

Volume Module:PM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows for North Bound, South Bound, East Bound, West Bound.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows for North Bound, South Bound, East Bound, West Bound.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows for North Bound, South Bound, East Bound, West Bound.

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps. Rows for North Bound, South Bound, East Bound, West Bound.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct. Rows for North Bound, South Bound, East Bound, West Bound.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case. Rows for North Bound, South Bound, East Bound, West Bound.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj. Rows for North Bound, South Bound, East Bound, West Bound.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type. Rows for North Bound, South Bound, East Bound, West Bound.

Table with columns for DelAdjFctr. Rows for North Bound, South Bound, East Bound, West Bound.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #10 Eight Mile Road & Leach Road, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and a note about queue distance.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.40 0.47 0.47 0.01 0.08 0.08 0.01 0.16 0.16 0.24 0.39 0.39
ArrivalType: 4 4 4 4
ProgFactor: 0.81 0.71 0.87 1.00 0.98 0.97 1.00 0.98 0.98 0.97 0.81 0.79
Q1: 2.8 0.5 11.5 0.3 0.9 0.1 0.1 5.7 5.2 8.1 2.8 0.1
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.49 0.49 0.49
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.86 0.86 0.86
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.37 0.53 0.48
Q2: 0.3 0.1 2.9 1.0 0.3 0.0 0.3 2.2 2.5 1.1 0.2 0.0
HCM2KQueue: 3.1 0.6 14.5 1.4 1.3 0.1 0.3 7.9 7.7 9.2 2.9 0.1
70thFactor: 1.19 1.20 1.17 1.20 1.20 1.20 1.20 1.18 1.18 1.18 1.19 1.20
HCM2k70thQ: 3.7 0.7 16.9 1.6 1.5 0.1 0.4 9.4 9.1 10.9 3.5 0.1
85thFactor: 1.57 1.59 1.49 1.59 1.59 1.60 1.60 1.53 1.53 1.52 1.57 1.60
HCM2k85thQ: 4.9 1.0 21.5 2.1 2.0 0.2 0.5 12.1 11.8 14.0 4.6 0.2
90thFactor: 1.74 1.79 1.59 1.77 1.78 1.80 1.79 1.67 1.67 1.65 1.75 1.80
HCM2k90thQ: 5.4 1.1 23.0 2.4 2.3 0.2 0.6 13.2 12.9 15.2 5.1 0.2
95thFactor: 2.01 2.08 1.77 2.06 2.06 2.10 2.09 1.89 1.89 1.86 2.01 2.10
HCM2k95thQ: 6.2 1.3 25.6 2.8 2.6 0.2 0.7 15.0 14.6 17.1 5.9 0.2
98thFactor: 2.49 2.65 2.03 2.60 2.61 2.69 2.67 2.24 2.25 2.19 2.50 2.69
HCM2k98thQ: 7.7 1.6 29.3 3.5 3.3 0.3 0.9 17.8 17.4 20.2 7.4 0.3

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 Eight Mile & SR 99 W Frontage
Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 12 Average Delay (sec/veh): 28.2
Optimal Cycle: 62 Level Of Service: C
Street Name: SR 99 West Frontage Road Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 3 0 1 2 0 2 1 0
Volume Module: PM Peak Hour
Base Vol: 247 3 421 7 10 2 5 878 325 356 1061 6
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 247 3 421 7 10 2 5 878 325 356 1061 6
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 268 3 458 8 11 2 5 954 353 387 1153 7
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 268 3 458 8 11 2 5 954 353 387 1153 7
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 268 3 458 8 11 2 5 954 353 387 1153 7
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.83 0.83 0.93 0.96 0.96 0.93 0.89 0.83 0.90 0.89 0.89
Lanes: 1.00 0.01 0.99 1.00 0.83 0.17 1.00 3.00 1.00 2.00 2.98 0.02
Final Sat.: 1769 11 1573 1769 1513 303 1769 5083 1583 3432 5050 29
Capacity Analysis Module:
Vol/Sat: 0.15 0.29 0.29 0.00 0.01 0.01 0.00 0.19 0.22 0.11 0.23 0.23
Crit Moves: **** **** **** ****
Green/Cycle: 0.39 0.41 0.41 0.01 0.02 0.02 0.01 0.31 0.31 0.16 0.46 0.46
Volume/Cap: 0.39 0.72 0.72 0.72 0.39 0.39 0.49 0.60 0.72 0.72 0.49 0.49
Delay/Veh: 22.1 28.8 28.8 172.9 55.7 55.7 80.5 29.9 35.6 44.6 18.9 18.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 22.1 28.8 28.8 172.9 55.7 55.7 80.5 29.9 35.6 44.6 18.9 18.9
LOS by Move: C C C F E E F C D D B B
HCM2k95thQ: 248 539 539 53 46 46 9 380 415 283 337 337
Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, HCM2k98thQ.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #13 Eight Mile & SR 99 E Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.419
Loss Time (sec): 12 Average Delay (sec/veh): 24.7
Optimal Cycle: 36 Level Of Service: C

Street Name: SR 99 East Frontage Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0

Volume Module: PM Peak Hour
Base Vol: 249 17 150 4 13 9 3 178 205 99 177 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 249 17 150 4 13 9 3 178 205 99 177 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 271 18 163 4 14 10 3 193 223 108 192 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 271 18 163 4 14 10 3 193 223 108 192 3
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 271 18 163 4 14 10 3 193 223 108 192 3

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93
Lanes: 1.00 0.10 0.90 1.00 0.59 0.41 1.00 2.00 1.00 1.00 1.97 0.03
Final Sat.: 1769 164 1447 1769 1033 715 1769 3538 1583 1769 3468 59

Capacity Analysis Module:
Vol/Sat: 0.15 0.11 0.11 0.00 0.01 0.01 0.00 0.05 0.14 0.06 0.06 0.06
Crit Moves: ****
Green/Cycle: 0.37 0.39 0.39 0.01 0.03 0.03 0.02 0.34 0.34 0.15 0.47 0.47
Volume/Cap: 0.42 0.29 0.29 0.29 0.42 0.42 0.12 0.16 0.42 0.42 0.12 0.12
Delay/Veh: 24.2 21.2 21.2 59.7 52.3 52.3 50.5 23.4 26.2 40.0 15.1 15.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 24.2 21.2 21.2 59.7 52.3 52.3 50.5 23.4 26.2 40.0 15.1 15.1
LOS by Move: C C C E D D D C C D B B
HCM2k95thQ: 269 163 163 23 66 66 5 91 224 166 67 67

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report 2000 HCM Operations Method Base Volume Alternative

Intersection #13 Eight Mile & SR 99 E Frontage

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 2 0 1 1 0 1 1 0
Lane Group: L RT RT L RT RT L T R L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 2 1 1 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx 0.87 0.87 xxxx 0.94 0.94 xxxx xxxx 0.85 xxxx 1.00 1.00
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.85 0.85 0.93 0.92 0.92 0.93 0.98 0.83 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 0.95
Fnl Sat Adj: 0.93 0.85 0.85 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated >
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module and rows for various traffic metrics like Cycle, Loss Time, Optimal Cycle, etc.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Cycle (sec): 100 Critical Vol./Cap.(X): 0.383
Loss Time (sec): 9 Average Delay (sec/veh): 17.3
Optimal Cycle: 29 Level Of Service: B

Street Name: Tra Vigne Road C Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 3 0 1 1 0 3 0 0

Volume Module:PM Peak Hour

Base Vol: 97 0 96 0 0 0 0 650 51 234 724 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 97 0 96 0 0 0 0 650 51 234 724 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 105 0 104 0 0 0 0 707 55 254 787 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 105 0 104 0 0 0 0 707 55 254 787 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 105 0 104 0 0 0 0 707 55 254 787 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.89 0.83 0.93 0.89 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 3.00 1.00 1.00 3.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 5083 1583 1769 5083 0

Capacity Analysis Module:

Vol/Sat: 0.06 0.00 0.07 0.00 0.00 0.00 0.00 0.14 0.04 0.14 0.15 0.00
Crit Moves: ****
Green/Cycle: 0.17 0.00 0.17 0.00 0.00 0.00 0.00 0.36 0.36 0.38 0.74 0.00
Volume/Cap: 0.35 0.00 0.38 0.00 0.00 0.00 0.00 0.38 0.10 0.38 0.21 0.00
Delay/Veh: 37.1 0.0 37.6 0.0 0.0 0.0 0.0 23.7 21.1 23.2 4.1 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 37.1 0.0 37.6 0.0 0.0 0.0 0.0 23.7 21.1 23.2 4.1 0.0
LOS by Move: D A D A A A C C C A A
HCM2k95thQ: 149 0 153 0 0 0 0 252 49 231 21 0

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Base Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 3 0 1 1 0 3 0 0
Lane Group: L xxxx R xxxx xxxx xxxx xxxx T R L T xxxx
#LnsInGrps: 1 0 1 0 0 0 0 0 3 1 1 3 0

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx xxxx xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
Hev Veh Adj: 0.98 xxxx 0.98 xxxx xxxx xxxxx xxxx 0.98 0.98 0.98 0.98 xxxxxx
Grade Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
Parking Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxxx 1.00 xxxxxx
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx
Area Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
RT Adj: xxxx xxxx 0.85 xxxx xxxx xxxxx xxxx xxxx 0.85 xxxx xxxx xxxxxx
LT Adj: 0.95 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.98 0.83 0.93 0.98 1.00
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00
Fnl Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.89 0.83 0.93 0.89 1.00

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > >

>

DelAdjFctr: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various intersection factors like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative No Project PM Peak Hour

Base Queue Length Report (feet)

Table with columns for Node Intersection, Northbound, Southbound, Eastbound, Westbound and rows for intersection nodes #3 through #21.

 Cumulative Plus Project AM Peak Hour

Scenario Report

Scenario: Cumul + Proj AM
 Command: Cumul + Proj AM
 Volume: Cumul AM Pk Hr
 Geometry: Cumulative
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: Cumulative
 Paths: Cumul Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Cumulative Plus Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total	
1	Gill Med Ctr	36.00	WomenMedCr	KSF	0.61	0.28	22	10	32	9.9
1	Gill Med Ctr	60.00	MedOffBldg	KSF	2.17	0.61	130	37	167	51.7
1	Gill Med Ctr	140.00	Hospital	KSF	0.61	0.28	85	39	124	38.4
Zone 1 Subtotal							237	86	323	100.0
TOTAL							237	86	323	100.0

Cumulative Plus Project AM Peak Hour

Trip Distribution Report

Percent Of Trips Cumulative

Zone	To Gates										
	1	2	5	7	9	10	11	12	13	14	15
1	0.1	1.9	2.8	1.3	26.0	1.7	0.1	8.1	1.5	23.7	0.2

Zone	To Gates									
	16	17	18	19	21	22	23	24	25	
1	0.2	15.8	11.0	0.1	1.1	2.4	0.2	1.4	0.4	

Cumulative Plus Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	27.7 0.539	C	28.4 0.571	+ 0.659 D/V
# 4 Eight Mile & Lower Sacramento	C	28.5 0.557	C	28.8 0.575	+ 0.275 D/V
# 5 West Lane & Armstrong Road	C	27.2 0.511	C	27.1 0.512	-0.031 D/V
# 6 West Lane & Ham Lane	B	11.8 0.221	B	12.3 0.222	+ 0.503 D/V
# 7 West Lane & Eight Mile Road	C	30.6 0.623	C	31.4 0.631	+ 0.789 D/V
# 8 West Lane & Morada Lane	C	33.5 0.671	C	33.5 0.671	+ 0.069 D/V
# 9 Eight Mile Road & Ham Lane	A	5.4 0.208	A	7.7 0.243	+ 2.332 D/V
# 10 Eight Mile Road & Leach Road	C	20.6 0.354	C	20.2 0.361	-0.413 D/V
# 11 Eight Mile & MickeGrove/Holman	C	29.9 0.625	C	29.5 0.626	-0.326 D/V
# 12 Eight Mile & SR 99 W Frontage	C	29.1 0.773	C	28.9 0.773	-0.130 D/V
# 13 Eight Mile & SR 99 E Frontage	C	23.1 0.429	C	23.1 0.429	-0.055 D/V
# 20 West Lane & Tra Vigne Road B	C	28.2 0.609	C	27.9 0.614	-0.310 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	16.8 0.369	B	17.3 0.382	+ 0.441 D/V
# 22 West Lane & W Project Driveway	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 23 Eight Mile & S Proj Driveway	A	0.0 0.000	B	11.0 0.094	+11.041 D/V
# 24 Ham Ln & E Project Driveway	A	0.0 0.000	A	8.8 0.033	+ 8.839 D/V

Cumulative Plus Project AM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 22 West Lane & W Project Driveway	???	???	No / No
# 23 Eight Mile & S Proj Driveway	???	???	No / No
# 24 Ham Ln & E Project Driveway	???	???	No / No

Cumulative Plus Project AM Peak Hour

 Peak Hour Delay Signal Warrant Report

 Intersection #22 West Lane & W Project Driveway

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 366 147	0 556 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 366 147	0 556 0	0 0 0 0	0 0 0 0
Major Street Volume:	1069			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	262			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 3 0 0	0 0 2 1 0
Initial Vol:	0 0 0 0	0 0 0 57	0 882 0	0 876 38
ApproachDel:	xxxxxx	11.0	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=57]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1853]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 3 0 0	0 0 2 1 0
Initial Vol:	0 0 0 0	0 0 0 57	0 882 0	0 876 38
Major Street Volume:	1796			
Minor Approach Volume:	57			
Minor Approach Volume Threshold:	83 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	47 66 0	0 61 5	2 0 27	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	8.8	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=29]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=208]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various traffic signal details.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 2 columns: Metric (Cycle, Loss Time, Optimal Cycle) and Value (100, 12, 46).

Table with 5 columns: Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module:AM Peak Hour

Large table with 12 columns showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module:

Table with 12 columns showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns showing capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, Q2, HCM2KQueue, HCM2k70thQ, HCM2k85thQ, HCM2k90thQ, HCM2k95thQ, HCM2k98thQ, and various Factor values.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap. (X): 0.575
Loss Time (sec): 12 Average Delay (sec/veh): 28.8
Optimal Cycle: 46 Level Of Service: C

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0

Volume Module: AM Peak Hour
Base Vol: 241 454 241 2 634 99 139 494 142 212 434 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 241 454 241 2 634 99 139 494 142 212 434 5
Added Vol: 0 0 37 1 0 0 0 38 0 14 14 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 241 454 278 3 634 99 139 532 142 226 448 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 262 493 302 3 689 108 151 578 154 246 487 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 262 493 302 3 689 108 151 578 154 246 487 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 262 493 302 3 689 108 151 578 154 246 487 5

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.93
Lanes: 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 1.98 0.02
Final Sat.: 3432 3538 1583 3432 3538 1583 3432 3538 1583 3432 3492 39

Capacity Analysis Module:
Vol/Sat: 0.08 0.14 0.19 0.00 0.19 0.07 0.04 0.16 0.10 0.07 0.14 0.14
Crit Moves: **** **** **** ****
Green/Cycle: 0.13 0.47 0.47 0.00 0.34 0.34 0.10 0.28 0.28 0.12 0.31 0.31
Volume/Cap: 0.58 0.30 0.41 0.41 0.58 0.20 0.45 0.58 0.34 0.58 0.45 0.45
Delay/Veh: 42.5 16.5 17.8 80.3 27.8 23.6 43.5 31.4 28.8 43.2 27.9 27.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 42.5 16.5 17.8 80.3 27.8 23.6 43.5 31.4 28.8 43.2 27.9 27.9
LOS by Move: D B B F C C D C C D C C
HCM2k95thQ: 229 186 240 20 410 104 139 377 178 220 289 289

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0
Lane Group: L T R L T R L T R L RT RT
#LnsInGrps: 2 2 1 2 2 1 2 2 1 2 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 1.00 1.00
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 0.95
Fnl Sat Adj: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
>

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #5 West Lane & Armstrong Road showing Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ, and a Note about queue distance.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach, Movement, and four bound directions (North, South, East, West). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach, Movement, and four bound directions (North, South, East, West). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

 Intersection #6 West Lane & Ham Lane

 Cycle (sec): 100 Critical Vol./Cap. (X): 0.222
 Loss Time (sec): 9 Average Delay (sec/veh): 12.3
 Optimal Cycle: 23 Level Of Service: B

 Street Name: Ham Lane West Lane
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Permitted Permitted Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
 Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

 Volume Module:AM Peak Hour
 Base Vol: 32 5 35 1 11 21 5 377 0 31 476 1
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 32 5 35 1 11 21 5 377 0 31 476 1
 Added Vol: 0 0 2 0 0 0 0 0 0 5 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 32 5 37 1 11 21 5 377 0 36 476 1
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 35 5 40 1 12 23 5 410 0 39 517 1
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 35 5 40 1 12 23 5 410 0 39 517 1
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 35 5 40 1 12 23 5 410 0 39 517 1

 Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.93 0.95 0.93 0.93 0.93
 Lanes: 0.43 0.07 0.50 0.03 0.33 0.64 1.00 2.00 0.00 1.00 1.99 0.01
 Final Sat.: 663 104 767 51 565 1079 1769 3538 0 1769 3530 7

 Capacity Analysis Module:
 Vol/Sat: 0.05 0.05 0.05 0.02 0.02 0.02 0.00 0.12 0.00 0.02 0.15 0.15
 Crit Moves: **** ****
 Green/Cycle: 0.24 0.24 0.24 0.24 0.24 0.24 0.01 0.57 0.00 0.11 0.66 0.66
 Volume/Cap: 0.22 0.22 0.22 0.09 0.09 0.09 0.22 0.20 0.00 0.20 0.22 0.22
 Delay/Veh: 31.1 31.1 31.1 29.9 29.9 29.9 53.3 10.7 0.0 41.2 6.8 6.8
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 31.1 31.1 31.1 29.9 29.9 29.9 53.3 10.7 0.0 41.2 6.8 6.8
 LOS by Move: C C C C C C D B A D A A
 HCM2k95thQ: 98 98 98 42 42 42 21 102 0 62 73 73

 Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

 Intersection #6 West Lane & Ham Lane

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 HCM Ops Adjusted Lane Utilization Module:
 Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
 Lane Group: LTR LTR LTR LTR LTR LTR L RT RT L RT RT
 #LnsInGrps: 1 1 1 1 1 1 1 2 2 1 2 2
 HCM Ops Input Saturation Adj Module:
 Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
 CrsswalkWid: 8 8 8 8
 % Hev Veh: 2 2 2
 Grade: 0% 0% 0% 0%
 Parking/Hr: No No No No
 Bus Stp/Hr: 0 0 0 0
 Area Type: < < < < < < < < < < < < < Other > > > > > > > > > > > > >
 Cnft Ped/Hr: 0 0 0 0
 ExclusivERT: Include Include Include Include
 % RT Prtct: 0 0 0 0
 HCM Ops f(lt) Adj Case Module:
 f(lt) Case: 5 5 5 5 5 5 1 xxxx xxxx 1 xxxx xxxx
 HCM Ops Saturation Adj Module:
 Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 RT Adj: 0.93 0.93 0.93 0.91 0.91 0.91 1.00 1.00 1.00 1.00 1.00 1.00
 LT Adj: 0.88 0.88 0.88 1.00 1.00 1.00 0.95 0.95 0.95 0.95 0.95 0.95
 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 HCM Sat Adj: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.98 1.00 0.93 0.98 0.98
 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
 Fnl Sat Adj: 0.81 0.81 0.81 0.89 0.89 0.89 0.93 0.93 0.95 0.93 0.93 0.93
 Delay Adjustment Factor Module:
 Coordinated: < < < < < < < < < < < < < No > > > > > > > > > > > > >
 Signal Type: < < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
 DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and movement sub-columns (L, T, R). Rows include Intersection #6 West Lane & Ham Lane, ArrivalType, ProgFactor, Q1, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.631
Loss Time (sec): 12 Average Delay (sec/veh): 31.4
Optimal Cycle: 51 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane and East Bound.

Volume Module: AM Peak Hour. Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module. Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module. Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns: HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

Table with columns: HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table with columns: HCM Ops f(lt) Adj Case Module, f(lt) Case.

Table with columns: HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with columns: Delay Adjustment Factor Module, Coordinated, Signal Type, DelAdjPctr.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. and rows for Saturation Flow Module metrics.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ and rows for Capacity Analysis Module metrics.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 West Lane & Morada Lane
Cycle (sec): 100
Loss Time (sec): 12
Optimal Cycle: 56
Critical Vol./Cap.(X): 0.671
Average Delay (sec/veh): 33.5
Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes and rows for Intersection #8 West Lane & Morada Lane.

Table with columns for Volume Module: AM Peak Hour and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. and rows for Saturation Flow Module metrics.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ and rows for Capacity Analysis Module metrics.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.243
Loss Time (sec): 9 Average Delay (sec/veh): 7.7
Optimal Cycle: 24 Level Of Service: A

Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 1 0 0 0 0 1 0 0 3 0 0 0 0 0 2 1 0

Volume Module:AM Peak Hour
Base Vol: 0 0 0 42 0 19 17 764 0 0 621 49
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 42 0 19 17 764 0 0 621 49
Added Vol: 0 0 0 27 0 0 10 0 0 0 38 38
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 69 0 19 27 764 0 0 659 87
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 75 0 21 29 830 0 0 716 95
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 75 0 21 29 830 0 0 716 95
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 75 0 21 29 830 0 0 716 95

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.89 1.00 1.00 0.88 0.88
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 3.00 0.00 0.00 2.65 0.35
Final Sat.: 0 0 0 1769 0 1583 1769 5083 0 0 4410 582

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.04 0.00 0.01 0.02 0.16 0.00 0.00 0.16 0.16
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.17 0.00 0.17 0.07 0.74 0.00 0.00 0.67 0.67
Volume/Cap: 0.00 0.00 0.00 0.24 0.00 0.07 0.24 0.22 0.00 0.00 0.24 0.24
Delay/Veh: 0.0 0.0 0.0 36.0 0.0 34.7 45.2 4.2 0.0 0.0 6.6 6.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 36.0 0.0 34.7 45.2 4.2 0.0 0.0 6.6 6.6
LOS by Move: A A A D A C D A A A A A
HCM2k95thQ: 0 0 0 103 0 28 42 23 0 0 72 72

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 0 0 1 0 0 0 1 1 0 3 0 0 0 0 2 1 0
Lane Group: xxxx xxxx xxxx L xxxx R L T xxxx xxxx RT RT
#LnsInGrps: 0 0 0 1 0 1 1 3 0 0 3 3

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: xxxx xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx xxxx xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxx 1.00 1.00
Hev Veh Adj: xxxx xxxx xxxxxx 0.98 xxxx 0.98 0.98 0.98 xxxxxx xxxx 0.98 0.98
Grade Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxx 1.00 1.00
Parking Adj: xxxx xxxx xxxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx xxxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxx 1.00 1.00
Area Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxx 1.00 1.00
RT Adj: xxxx xxxx xxxxxx xxxx xxxx 0.85 xxxx xxxx xxxxxx xxxx 0.98 0.98
LT Adj: xxxx xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx xxxx xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.98 1.00 1.00 0.96 0.96
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 0.91
Fnl Sat Adj: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.89 1.00 1.00 0.88 0.88

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjPctr: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table with columns for Street Name, Approach, Movement, Control, Rights, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module and rows for various traffic metrics like Cycle, Loss Time, Critical Vol., etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

 Intersection #11 Eight Mile & MickeGrove/Holman

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
 Loss Time (sec): 12 Average Delay (sec/veh): 29.5
 Optimal Cycle: 51 Level Of Service: C

Street Name:	Micke Grove Road/Holman Road			Eight Mile Road			West Bound					
Approach:	North Bound			South Bound			East Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	2	0	3	0	1	2

Volume Module:AM Peak Hour
 Base Vol: 220 46 339 11 81 3 4 474 195 558 371 4
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 220 46 339 11 81 3 4 474 195 558 371 4
 Added Vol: 4 0 0 0 0 0 0 26 1 0 71 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 224 46 339 11 81 3 4 500 196 558 442 4
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 243 50 368 12 88 3 4 543 213 607 480 4
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 243 50 368 12 88 3 4 543 213 607 480 4
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 243 50 368 12 88 3 4 543 213 607 480 4

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.90 0.93 0.83 0.93 0.93 0.83 0.90 0.89 0.83 0.90 0.89 0.83
 Lanes: 2.00 2.00 1.00 1.00 2.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
 Final Sat.: 3432 3538 1583 1769 3538 1583 3432 5083 1583 3432 5083 1583

Capacity Analysis Module:
 Vol/Sat: 0.07 0.01 0.23 0.01 0.02 0.00 0.00 0.11 0.13 0.18 0.09 0.00
 Crit Moves: **** **** **** ****
 Green/Cycle: 0.28 0.37 0.37 0.01 0.10 0.10 0.01 0.22 0.22 0.28 0.49 0.49
 Volume/Cap: 0.25 0.04 0.63 0.63 0.25 0.02 0.19 0.50 0.63 0.63 0.19 0.01
 Delay/Veh: 27.8 20.0 27.8 100.3 42.0 40.7 53.5 34.9 39.3 32.6 14.4 13.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 27.8 20.0 27.8 100.3 42.0 40.7 53.5 34.9 39.3 32.6 14.4 13.0
 LOS by Move: C C C F D D D C D C B B B
 HCM2k95thQ: 137 22 422 61 76 5 14 269 319 369 106 2

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Future Volume Alternative

 Intersection #11 Eight Mile & MickeGrove/Holman

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
 Lanes: 2 0 2 0 1 1 0 2 0 1 2 0 3 0 1 2 0 3 0 1
 Lane Group: L T R L T R L T R L T R
 #LnsInGrps: 2 2 1 1 2 1 2 3 1 2 3 1

HCM Ops Input Saturation Adj Module:
 Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
 CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
 % Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
 Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 Parking/Hr: No No No No No No No No
 Bus Stp/Hr: 0 0 0 0 0 0 0 0
 Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
 >
 Cnft Ped/Hr: 0 0 0 0 0 0 0 0
 ExclusivERT: Include Include Include Include
 % RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
 f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
 Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
 Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
 Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
 LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Sat Adj: 0.97 0.95 1.00 1.00 0.95 1.00 0.97 0.91 1.00 0.97 0.91 1.00
 Frl Sat Adj: 0.90 0.93 0.83 0.93 0.93 0.83 0.90 0.89 0.83 0.90 0.89 0.83

Delay Adjustment Factor Module:
 Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
 >
 Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
 >
 DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Eight Mile & SR 99 W Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.773
Loss Time (sec): 12 Average Delay (sec/veh): 28.9
Optimal Cycle: 71 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR 99 West Frontage Road, Eight Mile Road, North Bound, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include various traffic volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Saturation Flow Module data.

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows include Capacity Analysis Module data.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, HCM2k98thQ.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #13 Eight Mile & SR 99 E Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.429
 Loss Time (sec): 12 Average Delay (sec/veh): 23.1
 Optimal Cycle: 37 Level Of Service: C

Street Name: SR 99 East Frontage Road Eight Mile Road West Bound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
 Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0

Volume Module:AM Peak Hour
 Base Vol: 147 13 56 2 13 10 3 94 277 135 207 3
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 147 13 56 2 13 10 3 94 277 135 207 3
 Added Vol: 0 0 0 0 0 0 0 1 0 0 3 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 147 13 56 2 13 10 3 95 277 135 210 3
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 160 14 61 2 14 11 3 103 301 147 228 3
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 160 14 61 2 14 11 3 103 301 147 228 3
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 160 14 61 2 14 11 3 103 301 147 228 3

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93
 Lanes: 1.00 0.19 0.81 1.00 0.57 0.43 1.00 2.00 1.00 1.00 1.97 0.03
 Final Sat.: 1769 308 1327 1769 984 757 1769 3538 1583 1769 3481 50

Capacity Analysis Module:
 Vol/Sat: 0.09 0.05 0.05 0.00 0.01 0.01 0.00 0.03 0.19 0.08 0.07 0.07
 Crit Moves: **** **** ****
 Green/Cycle: 0.21 0.24 0.24 0.01 0.03 0.03 0.02 0.44 0.44 0.19 0.62 0.62
 Volume/Cap: 0.43 0.19 0.19 0.19 0.43 0.43 0.11 0.07 0.43 0.43 0.11 0.11
 Delay/Veh: 35.1 30.7 30.7 57.7 52.4 52.4 49.9 16.0 19.6 36.4 7.8 7.8
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 35.1 30.7 30.7 57.7 52.4 52.4 49.9 16.0 19.6 36.4 7.8 7.8
 LOS by Move: D C C E D D D B B D A A
 HCM2k95thQ: 215 90 90 14 68 68 5 36 246 204 40 40

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
 2000 HCM Operations Method
 Future Volume Alternative

 Intersection #13 Eight Mile & SR 99 E Frontage

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
 Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 2 0 1 1 0 1 1 0
 Lane Group: L RT RT L RT RT L T R L RT RT
 #LnsInGrps: 1 1 1 1 1 1 1 2 1 1 2 2

HCM Ops Input Saturation Adj Module:
 Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
 CrsswalkWid: 8 8 8 8
 % Hev Veh: 2 2 2 2
 Grade: 0% 0% 0% 0%
 Parking/Hr: No No No No
 Bus Stp/Hr: 0 0 0 0
 Area Type: < < < < < < < < < < Other > > > > > > > > > > > > >
 Cnft Ped/Hr: 0 0 0 0
 ExclusivERT: Include Include Include Include
 % RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
 f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
 Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Parking Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
 Bus Stp Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
 Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 RT Adj: xxxx 0.88 0.88 xxxx 0.94 0.94 xxxx xxxx 0.85 xxxx 1.00 1.00
 LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 HCM Sat Adj: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.98 0.83 0.93 0.98 0.98
 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 0.95
 Fnl Sat Adj: 0.93 0.86 0.86 0.93 0.92 0.92 0.93 0.93 0.83 0.93 0.93 0.93

Delay Adjustment Factor Module:
 Coordinated: < < < < < < < < < < No > > > > > > > > > > > > >
 Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
 DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #13 Eight Mile & SR 99 E Frontage

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 West Lane & Tra Vigne Road B

Cycle (sec): 100 Critical Vol./Cap.(X): 0.614
Loss Time (sec): 12 Average Delay (sec/veh): 27.9
Optimal Cycle: 50 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
 2000 HCM Operations Method
 Future Volume Alternative

```

*****
Intersection #20 West Lane & Tra Vigne Road B
*****
Approach:       North Bound      South Bound      East Bound      West Bound
Movement:       L - T - R      L - T - R      L - T - R      L - T - R
-----
HCM Ops Adjusted Lane Utilization Module:
Lanes:          1 0 2 1 0      1 0 3 0 1      1 0 1 0 1      1 0 0 1 0
Lane Group:     L  RT      RT  L  T      R  L  T      R  L  RT      RT
#LnsInGrps:    1  3      3  1  3      1  1  1      1  1      1
-----
HCM Ops Input Saturation Adj Module:
Lane Width:     12  12      12  12  12      12  12  12      12  12  12
CrsswalkWid:   8          8          8          8          8          8
% Hev Veh:     2          2          2          2          2          2
Grade:         0%         0%         0%         0%         0%         0%
Parking/Hr:    No          No          No          No          No          No
Bus Stp/Hr:    0          0          0          0          0          0
Area Type:     < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
>
Cnft Ped/Hr:   0          0          0          0          0          0
ExclusiveRT:  Include      Include      Include      Include      Include
% RT Prtct:   0          0          0          0          0
-----
HCM Ops f(lt) Adj Case Module:
f(lt) Case:   1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx
-----
HCM Ops Saturation Adj Module:
Ln Wid Adj:   1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:     xxxx 0.98  0.98  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.89  0.89
LT Adj:     0.95 xxxx  xxxxxx  0.95 xxxx  xxxxxx  0.95 xxxx  xxxxxx  0.95 xxxx  xxxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.96  0.96  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.87  0.87
Usr Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Sat Adj: 1.00 0.91  0.91  1.00 0.91  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.88  0.88  0.93 0.89  0.83  0.93 0.98  0.83  0.93 0.87  0.87
-----
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < No > > > > > > > > > > > > > >
>
Signal Type:  < < < < < < < < < < Actuated > > > > > > > > > > > > > >
>
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
*****
    
```

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
 2000 HCM Operations Method
 Future Volume Alternative

```

*****
Intersection #20 West Lane & Tra Vigne Road B
*****
Approach:       North Bound      South Bound      East Bound      West Bound
Movement:       L - T - R      L - T - R      L - T - R      L - T - R
-----
Green/Cycle:   0.13 0.41  0.41  0.09 0.37  0.37  0.33 0.12  0.12  0.26 0.05  0.05
ArrivalType:   4          4          4          4          4          4
ProgFactor:   0.98 0.81  0.81  0.98 0.89  0.82  0.86 0.96  0.98  0.94 0.99  0.99
Q1:           3.6 3.4  3.4  1.2 8.6  1.8  2.4 0.1  3.0  6.5 0.6  0.6
UpstreamVC:   0.40 0.40  0.40  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj:  0.92 0.92  0.92  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj:  0.28 0.57  0.57  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4 0.2  0.2  0.4 1.5  0.2  0.3 0.0  1.4  1.5 0.3  0.3
HCM2KQueue:   4.0 3.7  3.7  1.6 10.1  2.0  2.8 0.2  4.4  8.0 0.9  0.9
-----
70th%Factor:  1.19 1.19  1.19  1.20 1.18  1.20  1.19 1.20  1.19  1.18 1.20  1.20
HCM2k70thQ:   4.8 4.4  4.4  2.0 11.9  2.4  3.3 0.2  5.2  9.5 1.1  1.1
-----
85th%Factor:  1.56 1.57  1.57  1.58 1.51  1.58  1.57 1.60  1.56  1.53 1.59  1.59
HCM2k85thQ:   6.3 5.7  5.7  2.6 15.3  3.2  4.3 0.2  6.9  12.3 1.4  1.4
-----
90th%Factor:  1.73 1.73  1.73  1.77 1.64  1.76  1.75 1.80  1.72  1.67 1.78  1.78
HCM2k90thQ:   6.9 6.4  6.4  2.9 16.6  3.6  4.8 0.3  7.6  13.4 1.6  1.6
-----
95th%Factor:  1.98 1.99  1.99  2.05 1.84  2.04  2.01 2.09  1.97  1.88 2.07  2.07
HCM2k95thQ:   7.9 7.3  7.3  3.3 18.6  4.2  5.6 0.3  8.7  15.1 1.8  1.8
-----
98th%Factor:  2.43 2.45  2.45  2.58 2.16  2.55  2.51 2.69  2.41  2.24 2.63  2.63
HCM2k98thQ:   9.8 9.0  9.0  4.2 21.8  5.2  6.9 0.4  10.6  17.9 2.3  2.3
    
```

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Eight Mile Rd & Tra Vigne Rd C
Cycle (sec): 100 Critical Vol./Cap.(X): 0.382
Loss Time (sec): 9 Average Delay (sec/veh): 17.3
Optimal Cycle: 28 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Table for Volume Module: AM Peak Hour. Columns include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table for Saturation Flow Module. Columns include Sat/Lane, Adjustment, Lanes, Final Sat.

Table for Capacity Analysis Module. Columns include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Table for HCM Ops Adjusted Lane Utilization Module. Columns include Approach, Movement, Lane Group, #LnsInGrps.

Table for HCM Ops Input Saturation Adj Module. Columns include Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table for HCM Ops f(lt) Adj Case Module. Columns include f(lt) Case.

Table for HCM Ops Saturation Adj Module. Columns include Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Frl Sat Adj.

Table for Delay Adjustment Factor Module. Columns include Coordinated, Signal Type.

Table for DelAdjFctr. Columns include DelAdjFctr.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes and rows for various traffic metrics like Average Delay, Volume Module, Capacity Module, Level Of Service Module, etc.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #22 West Lane & W Project Driveway

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed:	4.00 feet/sec											
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period:	0.25 hour											

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway

Approach:	South Project Driveway			Eight Mile Road		
Movement:	L	T	R	L	T	R
Average Delay (sec/veh):	0.3			Worst Case Level Of Service: B[11.0]		
Control:	Stop Sign			Stop Sign		
Rights:	Include			Include		
Lanes:	0	0	0	0	0	0
Control:	Uncontrolled			Uncontrolled		
Rights:	Include			Include		
Lanes:	0	0	3	0	0	2
Volume Module:AM Peak Hour						
Base Vol:	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0
Added Vol:	0	0	0	57	0	38
PasserByVol:	0	0	0	0	0	0
Initial Fut:	0	0	0	57	882	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	62	959	41
Reduct Vol:	0	0	0	0	0	0
FinalVolume:	0	0	0	62	959	41
Critical Gap Module:						
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3
Capacity Module:						
Cnflict Vol:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	338
Potent Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	658
Move Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	658
Volume/Cap:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.09
Level Of Service Module:						
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.8
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	11.0
LOS by Move:	*	*	*	*	*	B
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*
ApproachDel:	xxxxxx		11.0	xxxxxx		xxxxxx
ApproachLOS:	*		B	*		*

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
 2000 HCM Unsignalized Method
 Future Volume Alternative

 Intersection #23 Eight Mile & S Proj Driveway

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed:	4.00 feet/sec											
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period:	0.25 hour											

Upstream Signals:

Link Index:	#113	#110
Dist(miles):	0.250	0.100
Speed (mph):	1.00	25.00
SignalIndex:	#21	#9
Cycle Time:	100 secs	100 secs
InitVolume:	0 740	0 659
Saturation:	0 5083	0 4410
ArrivalType:	0 4	0 4

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000	0.553	0.000	0.890
gq1:	0.00	6.51	0.00	1.65
gq2:	0.00	1.57	0.00	0.41
gq:	0.00	8.08	0.00	2.06

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:	0.350	0.350		
beta:	0.741	0.741		
ta (secs):	900.000	14.400		
F:	0.004	0.211		
f:	1.000	1.000	1.000	1.000
vcmax:	0 173	0 1702		
vcg:	0 281	0 878		
vcmin:	3000	3000	3000	3000
tp:	0.0	0.0	0.0	0.0
p:	0.000	0.000		

*** Computation 3: Platoon Event Periods
 pdom/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	1276	1952	320	1292	1932	338	0	xxxxx	xxxxx	0	xxxxx	xxxxxx
AdjCnflVol:	1276	1952	320	1292	1932	338	0	xxxxxx	xxxxxx	0	xxxxxx	xxxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1276	1952	320	1292	1932	338	0	xxxxxx	xxxxxx	0	xxxxxx	xxxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap:	124	63	676	155	65	658	1622	xxxxxx	xxxxxx	1622	xxxxxx	xxxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	124	63	676	155	65	658	1622	xxxxxx	xxxxxx	1622	xxxxxx	xxxxxx

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #24 Ham Ln & E Project Driveway

Average Delay (sec/veh):	2.9		Worst Case Level Of Service: A[8.8]									
Street Name:	Ham Lane			East Project Driveway								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	0	1	0	0	0	0	0

Volume Module:AM Peak Hour

Base Vol:	0	66	0	0	61	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	66	0	0	61	0	0	0	0	0	0
Added Vol:	47	0	0	0	0	5	2	0	27	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	66	0	0	61	5	2	0	27	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	51	72	0	0	66	5	2	0	29	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	51	72	0	0	66	5	2	0	29	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	72	xxxx	xxxxx	xxxx	xxxx	xxxxxx	243	243	69	xxxx	xxxx	xxxxxx
Potent Cap.:	1528	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	745	659	994	xxxx	xxxx	xxxxxx
Move Cap.:	1528	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	726	636	994	xxxx	xxxx	xxxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.03	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	2.6	xxxx	xxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx			
Control Del:	7.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	969	xxxxxx	xxxx	xxxx	xxxxxx			
SharedQueue:	0.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.1	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shrd ConDel:	7.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	8.8	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			8.8		xxxxxx						
ApproachLOS:	*			*			A		*			*			

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #24 Ham Ln & E Project Driveway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #96
Dist(miles): 0.250
Speed (mph): 1.00
SignalIndex: #6
Cycle Time: 100 secs
InitVolume: 36 11
Saturation: 1769 565
ArrivalType: 4 4
G/C: 0.11 0.24
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.144 0.315
gq1: 1.74 1.33
gq2: 0.05 0.04
gq: 1.79 1.37
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.550
beta: 0.645
ta (secs): 900.000
F: 0.003
f: 1.000 1.000
vcmax: 10 2
vcg: 11 3
vcmin: 1000 1000
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol: 72 xxxxx xxxxx 0 xxxxx xxxxx 243 243 69 258 246 72
AdjCnflVol: 72 xxxxx xxxxx 0 xxxxx xxxxx 243 243 69 258 246 72
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol: 72 xxxxx xxxxx 0 xxxxx xxxxx 243 243 69 258 246 72
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 1528 xxxxx xxxxx 1623 xxxxx xxxxx 745 659 994 695 657 991
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
Potent Cap.:1528 xxxxx xxxxx 1623 xxxxx xxxxx 745 659 994 695 657 991

Cumulative Plus Project AM Peak Hour

Future Queue Length Report (feet)

Table with columns: Node Intersection, Northbound (L -- T -- R), Southbound (L -- T -- R), Eastbound (L -- T -- R), Westbound (L -- T -- R). Rows #3 to #24 showing queue lengths for various intersections and movements.

 Cumulative Plus Project PM Peak Hour

Scenario Report

Scenario: Cumul + Proj PM
 Command: Cumul + Proj PM
 Volume: Cumul PM Pk Hr
 Geometry: Cumulative
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: Cumulative
 Paths: Cumul Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Cumulative Plus Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.31	0.66	11	24	35	9.3
1	Gill Med Ctr	60.00	MedOffBldg	KSF 0.97	2.49	58	149	207	54.9
1	Gill Med Ctr	140.00	Hospital	KSF 0.31	0.66	43	92	135	35.8
Zone 1 Subtotal						112	265	377	100.0
TOTAL						112	265	377	100.0

Cumulative Plus Project PM Peak Hour

Trip Distribution Report

Percent Of Trips Cumulative

Zone	To Gates										
	1	2	5	7	9	10	11	12	13	14	15
1	0.1	1.9	2.8	1.3	26.0	1.7	0.1	8.1	1.5	23.7	0.2

Zone	To Gates									
	16	17	18	19	21	22	23	24	25	
1	0.2	15.8	11.0	0.1	1.1	2.4	0.2	1.4	0.4	

Cumulative Plus Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	25.1 0.538	C	25.9 0.570	+ 0.781 D/V
# 4 Eight Mile & Lower Sacramento	C	28.3 0.528	C	28.8 0.549	+ 0.540 D/V
# 5 West Lane & Armstrong Road	C	27.9 0.597	C	27.9 0.598	+ 0.005 D/V
# 6 West Lane & Ham Lane	A	7.7 0.236	A	8.3 0.241	+ 0.555 D/V
# 7 West Lane & Eight Mile Road	C	28.0 0.538	C	28.9 0.562	+ 0.867 D/V
# 8 West Lane & Morada Lane	C	34.1 0.701	C	33.9 0.704	-0.148 D/V
# 9 Eight Mile Road & Ham Lane	A	3.8 0.238	A	9.4 0.308	+ 5.594 D/V
# 10 Eight Mile Road & Leach Road	C	22.1 0.406	C	21.4 0.415	-0.667 D/V
# 11 Eight Mile & MickeGrove/Holman	C	33.2 0.770	C	33.8 0.782	+ 0.524 D/V
# 12 Eight Mile & SR 99 W Frontage	C	28.2 0.717	C	28.5 0.717	+ 0.290 D/V
# 13 Eight Mile & SR 99 E Frontage	C	24.7 0.419	C	24.7 0.419	-0.008 D/V
# 20 West Lane & Tra Vigne Road B	C	28.2 0.519	C	27.8 0.535	-0.417 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	17.3 0.383	B	16.9 0.401	-0.419 D/V
# 22 West Lane & W Project Driveway	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 23 Eight Mile & S Proj Driveway	A	0.0 0.000	B	12.3 0.262	+12.301 D/V
# 24 Ham Ln & E Project Driveway	A	0.0 0.000	A	9.0 0.092	+ 9.036 D/V

Cumulative Plus Project PM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 22 West Lane & W Project Driveway	???	???	No / No
# 23 Eight Mile & S Proj Driveway	???	???	No / Yes
# 24 Ham Ln & E Project Driveway	???	???	No / No

Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 514 69	0 380 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 514 69	0 380 0	0 0 0 0	0 0 0 0
Major Street Volume:	963			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	298			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 3 0 0	0 0 2 1 0
Initial Vol:	0 0 0 0	0 0 175	0 751 0	0 958 18
ApproachDel:	xxxxxx	12.3	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.6]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=175]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1902]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 3 0 0	0 0 2 1 0
Initial Vol:	0 0 0 0	0 0 0 175	0 751 0	0 958 18
Major Street Volume:	1727			
Minor Approach Volume:	175			
Minor Approach Volume Threshold:	97 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	22 56 0	0 56 2	5 0 85	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	9.0	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=90]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=226]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various signal and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with signal and control data.

Volume Module: PM Peak Hour

Table with 11 columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 11 columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 11 columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 12 Average Delay (sec/veh): 28.8
Optimal Cycle: 44 Level Of Service: C

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0

Volume Module: PM Peak Hour
Base Vol: 192 560 232 13 590 194 146 506 226 211 505 6
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 192 560 232 13 590 194 146 506 226 211 505 6
Added Vol: 0 0 18 0 0 0 0 18 0 42 43 1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 192 560 250 13 590 194 146 524 226 253 548 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 209 609 272 14 641 211 159 570 246 275 596 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 209 609 272 14 641 211 159 570 246 275 596 8
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 209 609 272 14 641 211 159 570 246 275 596 8

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.93
Lanes: 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 1.97 0.03
Final Sat.: 3432 3538 1583 3432 3538 1583 3432 3538 1583 3432 3486 45

Capacity Analysis Module:
Vol/Sat: 0.06 0.17 0.17 0.00 0.18 0.13 0.05 0.16 0.16 0.08 0.17 0.17
Crit Moves: **** **** **** ****
Green/Cycle: 0.11 0.43 0.43 0.01 0.33 0.33 0.09 0.29 0.29 0.15 0.35 0.35
Volume/Cap: 0.55 0.40 0.40 0.40 0.55 0.40 0.49 0.55 0.53 0.55 0.49 0.49
Delay/Veh: 43.8 19.8 20.0 56.4 28.0 26.4 44.3 30.4 30.7 40.9 26.1 26.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.8 19.8 20.0 56.4 28.0 26.4 44.3 30.4 30.7 40.9 26.1 26.1
LOS by Move: D B B E C C D C C D C C
HCM2k95thQ: 192 271 236 36 381 228 152 361 304 230 339 339

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 2 0 1 2 0 1 1 0
Lane Group: L T R L T R L T R L RT RT
#LnsInGrps: 2 2 1 2 2 1 2 2 1 2 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 1.00 1.00
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.95 0.95
Fnl Sat Adj: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
>

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.598
Loss Time (sec): 12 Average Delay (sec/veh): 27.9
Optimal Cycle: 48 Level Of Service: C

Table with columns for Street Name (West Lane, Armstrong Road) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, Lanes.

Table with columns for Volume Module: PM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1 1 0 1 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 1 2 1 1 2 1 1 1 1 1 1 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 0.95 1.00 1.00 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.93 0.83 0.93 0.93 0.83 0.93 0.93 0.83 0.93 0.98 0.83
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.00 0.28 0.28 0.20 0.47 0.47 0.05 0.22 0.22 0.18 0.36 0.36
ArrivalType: 4 4 4 4
ProgFactor: 1.00 0.93 0.88 0.96 0.74 0.71 0.99 0.92 0.91 0.94 0.86 0.90
Q1: 0.1 6.9 0.6 5.2 3.2 0.7 1.3 1.6 0.1 1.4 4.9 6.9
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 0.3 1.4 0.1 1.4 0.4 0.1 1.2 0.2 0.0 0.2 0.7 1.4
HCM2KQueue: 0.3 8.3 0.6 6.5 3.6 0.7 2.5 1.9 0.1 1.6 5.6 8.3
70th%Factor: 1.20 1.18 1.20 1.18 1.19 1.20 1.19 1.20 1.20 1.20 1.19 1.18
HCM2k70thQ: 0.4 9.8 0.8 7.8 4.3 0.9 3.0 2.2 0.1 1.9 6.7 9.8
85th%Factor: 1.60 1.53 1.59 1.54 1.57 1.59 1.58 1.58 1.60 1.58 1.55 1.53
HCM2k85thQ: 0.6 12.7 1.0 10.1 5.7 1.2 3.9 2.9 0.1 2.5 8.7 12.7
90th%Factor: 1.79 1.66 1.79 1.69 1.73 1.79 1.75 1.76 1.80 1.77 1.70 1.66
HCM2k90thQ: 0.6 13.9 1.2 11.0 6.3 1.3 4.4 3.3 0.1 2.8 9.6 13.8
95th%Factor: 2.09 1.88 2.08 1.92 1.99 2.08 2.02 2.04 2.10 2.05 1.94 1.88
HCM2k95thQ: 0.7 15.6 1.3 12.5 7.2 1.6 5.0 3.8 0.2 3.3 10.9 15.6
98th%Factor: 2.67 2.23 2.65 2.30 2.46 2.64 2.53 2.57 2.69 2.58 2.35 2.23
HCM2k98thQ: 0.9 18.6 1.7 15.1 8.9 2.0 6.3 4.8 0.2 4.1 13.2 18.5

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane
Cycle (sec): 100 Critical Vol./Cap. (X): 0.241
Loss Time (sec): 9 Average Delay (sec/veh): 8.3
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module:PM Peak Hour.

Table with columns for Volume Module:PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat, Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Table with columns for Approach, Movement, HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps.

Table with columns for HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table with columns for HCM Ops f(lt) Adj Case Module, f(lt) Case.

Table with columns for HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Ustr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with columns for Delay Adjustment Factor Module, Coordinated, Signal Type, DelAdjPctr.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 12 Average Delay (sec/veh): 28.9
Optimal Cycle: 45 Level Of Service: C

Street Name: West Lane South Bound East Bound West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 2 1 0 2 0 1 1 0

Volume Module: PM Peak Hour
Base Vol: 193 464 290 19 335 26 45 419 255 298 499 6
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 193 464 290 19 335 26 45 419 255 298 499 6
Added Vol: 0 29 0 0 0 0 36 0 0 68 86 5
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 193 493 290 19 335 26 81 419 255 366 585 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 210 536 315 21 364 28 88 455 277 398 636 12
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 210 536 315 21 364 28 88 455 277 398 636 12
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 210 536 315 21 364 28 88 455 277 398 636 12

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.84 0.84 0.90 0.93 0.93
Lanes: 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 1.96 0.04
Final Sat.: 3432 3538 1583 3432 3538 1583 3432 3196 1598 3432 3462 65

Capacity Analysis Module:
Vol/Sat: 0.06 0.15 0.20 0.01 0.10 0.02 0.03 0.14 0.17 0.12 0.18 0.18
Crit Moves: **** **
Green/Cycle: 0.14 0.35 0.35 0.01 0.23 0.23 0.06 0.31 0.31 0.21 0.45 0.45
Volume/Cap: 0.45 0.43 0.56 0.56 0.45 0.08 0.41 0.46 0.56 0.56 0.41 0.41
Delay/Veh: 40.4 24.8 27.3 67.6 33.5 30.4 46.3 28.1 29.5 36.7 18.6 18.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 40.4 24.8 27.3 67.6 33.5 30.4 46.3 28.1 29.5 36.7 18.6 18.6
LOS by Move: D C C E C C D C C D B B
HCM2k95thQ: 172 286 356 54 248 33 93 285 364 294 275 275

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 2 0 1 2 0 2 0 1 2 0 2 1 0 2 0 1 1 0
Lane Group: L T R L T R L RT RT L RT RT
#LnsInGrps: 2 2 1 2 2 1 2 3 3 2 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 0.94 0.94 xxxx 1.00 1.00
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.92 0.92 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 0.97 0.95 1.00 0.97 0.95 1.00 0.97 0.91 0.91 0.97 0.95 0.95
Fnl Sat Adj: 0.90 0.93 0.83 0.90 0.93 0.83 0.90 0.84 0.84 0.90 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 West Lane & Morada Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.704
Loss Time (sec): 12 Average Delay (sec/veh): 33.9
Optimal Cycle: 60 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Table with 12 columns for North, South, East, and West bounds. Rows include: Intersection #8 West Lane & Morada Lane, Approach, Movement, HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps, HCM Ops Input Saturation Adj Module, Area Type, Cnft Ped/Hr, ExclusiveRT, % RT Prtct, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, Delay Adjustment Factor Module, Signal Type, and DelAdjFctr.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 12 columns for North, South, East, and West bounds. Rows include: Intersection #8 West Lane & Morada Lane, Approach, Movement, Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, and HCM2k98thQ.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane
Cycle (sec): 100 Critical Vol./Cap.(X): 0.308
Loss Time (sec): 9 Average Delay (sec/veh): 9.4
Optimal Cycle: 26 Level Of Service: A
Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 3 0 0 0 0 2 1 0
Volume Module: PM Peak Hour
Base Vol: 0 0 0 32 0 24 10 720 0 0 839 46
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 32 0 24 10 720 0 0 839 46
Added Vol: 0 0 0 85 0 0 5 0 0 0 18 18
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 117 0 24 15 720 0 0 857 64
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 127 0 26 16 783 0 0 932 70
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 127 0 26 16 783 0 0 932 70
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 127 0 26 16 783 0 0 932 70
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.89 1.00 1.00 0.88 0.88
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 3.00 0.00 0.00 2.79 0.21
Final Sat.: 0 0 0 1769 0 1583 1769 5083 0 0 4683 350
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.07 0.00 0.02 0.01 0.15 0.00 0.00 0.20 0.20
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.23 0.00 0.23 0.03 0.68 0.00 0.00 0.65 0.65
Volume/Cap: 0.00 0.00 0.00 0.31 0.00 0.07 0.31 0.23 0.00 0.00 0.31 0.31
Delay/Veh: 0.0 0.0 0.0 32.1 0.0 29.9 50.8 6.2 0.0 0.0 7.9 7.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 32.1 0.0 29.9 50.8 6.2 0.0 0.0 7.9 7.9
LOS by Move: A A A A C C D A A A A
HCM2k95thQ: 0 0 0 157 0 30 26 63 0 0 114 114

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 0 0 1 0 0 0 1 1 0 3 0 0 0 0 2 1 0
Lane Group: xxxx xxxx xxxx L xxxx R L T xxxx xxxx RT RT
#LnsInGrps: 0 0 0 1 0 1 1 3 0 0 3 3
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: <<<<<<<<<<<<<<< Other >>>>>>>>>>>>>>>>>>>>>>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: xxxx xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx xxxx xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxxx 1.00 1.00
Hev Veh Adj: xxxx xxxx xxxxxx 0.98 xxxx 0.98 0.98 0.98 xxxxxx xxxxx 0.98 0.98
Grade Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxxx 1.00 1.00
Parking Adj: xxxx xxxx xxxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx xxxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxxx 1.00 1.00
Area Adj: xxxx xxxx xxxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxxx xxxxx 1.00 1.00
RT Adj: xxxx xxxx xxxxxx xxxx xxxx 0.85 xxxx xxxx xxxxxx xxxxx 0.99 0.99
LT Adj: xxxx xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx xxxx xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.98 1.00 1.00 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 0.91
Fnl Sat Adj: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.89 1.00 1.00 0.88 0.88
Delay Adjustment Factor Module:
Coordinated: <<<<<<<<<<<<<<< No >>>>>>>>>>>>>>>>>>>>>>
Signal Type: <<<<<<<<<<<<<< Actuated >>>>>>>>>>>>>>>>>>>>>>
DelAdjPctr: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #10 Eight Mile Road & Leach Road, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ, and a Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Table with columns for Approach, Movement, Lane Group, and HCM Ops Adjusted Lane Utilization Module. Includes data for North, South, East, and West bounds.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Table with columns for Approach, Movement, Lane Group, and HCM Ops Adjusted Lane Utilization Module. Includes data for North, South, East, and West bounds.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Eight Mile & MickeGrove/Holman

Cycle (sec): 100 Critical Vol./Cap. (X): 0.782
Loss Time (sec): 12 Average Delay (sec/veh): 33.8
Optimal Cycle: 73 Level Of Service: C

Street Name: Micke Grove Road/Holman Road Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 0 1 1 0 2 0 1 2 0 3 0 1 2 0 3 0 1

Volume Module: PM Peak Hour
Base Vol: 330 89 529 11 64 3 5 558 184 573 458 7
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 330 89 529 11 64 3 5 558 184 573 458 7
Added Vol: 2 0 0 0 0 0 0 80 5 0 34 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 332 89 529 11 64 3 5 638 189 573 492 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 361 97 575 12 70 3 5 693 205 623 535 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 361 97 575 12 70 3 5 693 205 623 535 8
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 361 97 575 12 70 3 5 693 205 623 535 8

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.93 0.83 0.93 0.93 0.83 0.90 0.89 0.83 0.90 0.89 0.83
Lanes: 2.00 2.00 1.00 1.00 2.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
Final Sat.: 3432 3538 1583 1769 3538 1583 3432 5083 1583 3432 5083 1583

Capacity Analysis Module:
Vol/Sat: 0.11 0.03 0.36 0.01 0.02 0.00 0.00 0.14 0.13 0.18 0.11 0.00
Crit Moves: **** ****
Green/Cycle: 0.40 0.46 0.46 0.01 0.07 0.07 0.01 0.17 0.17 0.23 0.40 0.40
Volume/Cap: 0.26 0.06 0.78 0.78 0.26 0.03 0.26 0.78 0.74 0.78 0.26 0.01
Delay/Veh: 20.3 14.7 27.9 172.2 44.2 43.0 56.2 44.0 49.6 41.1 20.1 18.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 20.3 14.7 27.9 172.2 44.2 43.0 56.2 44.0 49.6 41.1 20.1 18.1
LOS by Move: C B C F D D E D D C B
HCM2k95thQ: 159 32 656 70 66 6 19 434 360 432 157 5

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 2 0 1 1 0 2 0 1 2 0 3 0 1 2 0 3 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 2 2 1 1 2 1 2 3 1 2 3 1

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 0.97 0.95 1.00 1.00 0.95 1.00 0.97 0.91 1.00 0.97 0.91 1.00
Fnl Sat Adj: 0.90 0.93 0.83 0.93 0.93 0.83 0.90 0.89 0.83 0.90 0.89 0.83

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Eight Mile & SR 99 W Frontage

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 12 Average Delay (sec/veh): 28.5
Optimal Cycle: 62 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR 99 West Frontage Road, Eight Mile Road, Protected, Include, 0 0 0, 4.0 4.0 4.0, 1 0 0 1 0.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include 247 3 421, 7 10 2, 5 878 325, 356 1061 6, 1.00 1.00 1.00, 247 3 421, 7 10 2, 5 878 325, 356 1061 6, 0 0 0, 0 0 0, 247 3 421, 7 10 2, 5 958 325, 356 1095 6, 1.00 1.00 1.00, 1.00 1.00 1.00, 0.92 0.92 0.92, 0.92 0.92 0.92, 268 3 458, 8 11 2, 5 1041 353, 387 1190 7, 0 0 0, 0 0 0, 268 3 458, 8 11 2, 5 1041 353, 387 1190 7, 1.00 1.00 1.00, 1.00 1.00 1.00, 1.00 1.00 1.00, 1.00 1.00 1.00, 268 3 458, 8 11 2, 5 1041 353, 387 1190 7.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include 1900 1900 1900, 0.93 0.83 0.83, 1.00 0.01 0.99, 1769 11 1573.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows include 0.15 0.29 0.29, ****, 0.39 0.41 0.41, 0.39 0.72 0.72, 22.1 28.8 28.8, 1.00 1.00 1.00, 22.1 28.8, C C C, 248 539 539.

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1	0	0	1	0	3	0	1	2	0	2	1	0
Lane Group:	L	RT	RT	L	RT	RT	L	T	R	L	RT	RT				
#LnsInGrps:	1	1	1	1	1	1	1	3	1	2	3	3				
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8			8			
% Hev Veh:	2			2			2			2			2			
Grade:	0%			0%			0%			0%			0%			
Parking/Hr:	No			No			No			No			No			
Bus Stp/Hr:	0			0			0			0			0			
Area Type:	< < < < < < < < < < < < < Other > > > > > > > > > > > > >															

Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		

HCM Ops f(lt) Adj Case Module:	North Bound			South Bound			East Bound			West Bound						
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx				
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.85	0.85	xxxx	0.98	0.98	xxxx	0.85	0.85	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	xxxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.83	0.83	0.93	0.96	0.96	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.98
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.97	0.91	0.91	0.97	0.91	0.91	0.91
Fnl Sat Adj:	0.93	0.83	0.83	0.93	0.96	0.96	0.93	0.89	0.83	0.90	0.89	0.89	0.90	0.89	0.89	0.89

Delay Adjustment Factor Module:	North Bound			South Bound			East Bound			West Bound						
Coordinated:	<	<	<	<	<	<	<	<	<	<	<	<				
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #12 Eight Mile & SR 99 W Frontage

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.39	0.41	0.41	0.01	0.02	0.02	0.01	0.31	0.31	0.16	0.46	0.46
ArrivalType:	4			4			4			4		
ProgFactor:	0.83	0.90	0.90	1.00	1.00	1.00	1.00	0.93	0.94	0.98	0.80	0.80
Q1:	4.5	9.6	9.6	0.2	0.4	0.4	0.2	8.5	8.2	5.2	6.8	6.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.78	0.78	0.48	0.48	0.48
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.53	0.88	0.88	0.88
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	0.03	0.28	0.25	0.30	0.59	0.59
Q2:	0.6	2.3	2.3	0.8	0.5	0.5	0.0	0.5	0.6	0.7	0.6	0.6
HCM2KQueue:	5.1	11.9	11.9	1.0	0.9	0.9	0.2	9.1	8.8	5.9	7.4	7.4
70th%Factor:	1.19	1.17	1.17	1.20	1.20	1.20	1.20	1.18	1.18	1.19	1.18	1.18
HCM2k70thQ:	6.0	14.0	14.0	1.2	1.1	1.1	0.2	10.7	10.4	7.0	8.8	8.8
85th%Factor:	1.55	1.50	1.50	1.59	1.59	1.59	1.60	1.52	1.52	1.55	1.53	1.53
HCM2k85thQ:	7.9	17.9	17.9	1.6	1.4	1.4	0.3	13.8	13.4	9.1	11.4	11.4
90th%Factor:	1.71	1.62	1.62	1.78	1.78	1.78	1.80	1.65	1.66	1.70	1.68	1.68
HCM2k90thQ:	8.7	19.3	19.3	1.8	1.6	1.6	0.3	15.0	14.6	10.0	12.4	12.4
95th%Factor:	1.95	1.81	1.81	2.07	2.07	2.07	2.09	1.86	1.87	1.93	1.90	1.90
HCM2k95thQ:	9.9	21.5	21.5	2.1	1.8	1.8	0.4	16.9	16.4	11.3	14.1	14.1
98th%Factor:	2.38	2.10	2.10	2.62	2.63	2.63	2.69	2.20	2.21	2.34	2.27	2.27
HCM2k98thQ:	12.1	25.0	25.0	2.7	2.3	2.3	0.5	19.9	19.4	13.7	16.8	16.8

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #20 West Lane & Tra Vigne Road B, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and LOS by Move.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Cycle (sec): 100 Critical Vol./Cap.(X): 0.401
Loss Time (sec): 9 Average Delay (sec/veh): 16.9
Optimal Cycle: 29 Level Of Service: B

Street Name: Tra Vigne Road C Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 1 1 0 3 0 0

Volume Module:PM Peak Hour
Base Vol: 97 0 96 0 0 0 0 650 51 234 724 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 97 0 96 0 0 0 0 650 51 234 724 0
Added Vol: 5 0 5 0 0 0 0 0 0 21 154 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 102 0 101 0 0 0 0 650 51 255 878 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 111 0 110 0 0 0 0 707 55 277 954 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 111 0 110 0 0 0 0 707 55 277 954 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 111 0 110 0 0 0 0 707 55 277 954 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.89 0.83 0.93 0.89 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 3.00 1.00 1.00 3.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 5083 1583 1769 5083 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.00 0.07 0.00 0.00 0.00 0.00 0.14 0.04 0.16 0.19 0.00
Crit Moves: ****
Green/Cycle: 0.17 0.00 0.17 0.00 0.00 0.00 0.00 0.35 0.35 0.39 0.74 0.00
Volume/Cap: 0.36 0.00 0.40 0.00 0.00 0.00 0.00 0.40 0.10 0.40 0.25 0.00
Delay/Veh: 37.2 0.0 37.7 0.0 0.0 0.0 0.0 25.0 22.2 22.4 4.3 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 37.2 0.0 37.7 0.0 0.0 0.0 0.0 25.0 22.2 22.4 4.3 0.0
LOS by Move: D A D A A A A C C C A A
HCM2k95thQ: 157 0 162 0 0 0 0 263 51 246 27 0

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 3 0 1 1 0 3 0 0
Lane Group: L xxxx R xxxx xxxx xxxx xxxx T R L T xxxx
#LnsInGrps: 1 0 1 0 0 0 0 0 3 1 1 3 0

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx xxxx xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
Hev Veh Adj: 0.98 xxxx 0.98 xxxx xxxx xxxxx xxxx 0.98 0.98 0.98 0.98 xxxxxx
Grade Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
Parking Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxxx
Area Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxxx
RT Adj: xxxx xxxx 0.85 xxxx xxxx xxxxx xxxx xxxx 0.85 xxxx xxxx xxxxxx
LT Adj: 0.95 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.98 0.83 0.93 0.98 1.00
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00
Fnl Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.89 0.83 0.93 0.89 1.00

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjPctr: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes and rows for various traffic metrics like Average Delay, Volume Module, Capacity Module, Level Of Service Module, etc.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #22 West Lane & W Project Driveway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway
Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[12.3]
Street Name: South Project Driveway Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 3 0 0 0 0 2 1 0
Volume Module: PM Peak Hour
Base Vol: 0 0 0 0 0 0 0 0 746 0 0 958 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 0 0 0 0 746 0 0 958 0
Added Vol: 0 0 0 0 0 0 175 0 5 0 0 0 18
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 175 0 751 0 0 958 18
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 0 0 0 175 0 751 0 0 958 18
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 175 0 751 0 0 958 18
Critical Gap Module:
Critical Gp: 6.9
FollowUpTim: 3.3
Capacity Module:
Cnflct Vol: 328
Potent Cap.: 667
Move Cap.: 667
Volume/Cap: 0.26
Level Of Service Module:
2Way95thQ: 26.2
Control Del: 12.3
LOS by Move: B
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 12.3
ApproachLOS: B

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #23 Eight Mile & S Proj Driveway

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed:	4.00 feet/sec											
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period:	0.25 hour											

Upstream Signals:

Link Index:	#113	#110
Dist(miles):	0.250	0.100
Speed (mph):	1.00	25.00
SignalIndex:	#21	#9
Cycle Time:	100 secs	100 secs
InitVolume:	0 650	0 857
Saturation:	0 5083	0 4683
ArrivalType:	0 4	0 4
G/C:	0.00 0.35	0.00 0.65

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000 0.462	0.000 0.862
gq1:	0.00 6.88	0.00 2.53
gq2:	0.00 1.41	0.00 0.82
gq:	0.00 8.30	0.00 3.35

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:	0.350	0.350
beta:	0.741	0.741
ta (secs):	900.000	14.400
F:	0.004	0.211
f:	1.000 1.000	1.000 1.000
vcmax:	0 177	0 2567
vcg:	0 251	0 1142
vcmin:	3000 3000	3000 3000
tp:	0.0 0.0	0.0 0.0
p:	0.000	0.000

*** Computation 3: Platoon Event Periods

pdom/psubo:	0.000/0.000/Unconstrained
-------------	---------------------------

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	1070 1727 250 1217 1718 328	0 xxxxxx xxxxxx	0 xxxxxx xxxxxx
AdjCnflVol:	1070 1727 250 1217 1718 328	0 xxxxxx xxxxxx	0 xxxxxx xxxxxx
UpstreamAdj:	1.00 1.000 1.000 1.00 1.000 1.000	1.00 x.xxx x.xxx	1.00 x.xxx x.xxx
ConflictVol:	1070 1727 250 1217 1718 328	0 xxxxxx xxxxxx	0 xxxxxx xxxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap:	175 88 749 173 89	667 1622 xxxxxx xxxxxx	1622 xxxxxx xxxxxx
UpstreamAdj:	1.00 1.000 1.000 1.00 1.000 1.000	1.00 x.xxx x.xxx	1.00 x.xxx x.xxx
Potent Cap.:	175 88 749 173 89	667 1622 xxxxxx xxxxxx	1622 xxxxxx xxxxxx

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #24 Ham Ln & E Project Driveway

Average Delay (sec/veh):	4.3			Worst Case Level Of Service: A[9.0]								
Street Name:	Ham Lane			East Project Driveway								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0 0 0	0	0	0 1 0	0	0	1 0 0	0	0	0 0 0

Volume Module: PM Peak Hour

Base Vol:	0 56	0 56	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00
Initial Bse:	0 56	0 56	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Added Vol:	22 0	0 0	0 2	5 0	85 0	0 0	0 0	0 0	0 0	0 0	0 0
PasserByVol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Initial Fut:	22 56	0 56	2 2	5 85	0 85	0 0	0 0	0 0	0 0	0 0	0 0
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00
PHF Adj:	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92	0.92 0.92
PHF Volume:	24 61	0 61	2 2	5 85	0 85	0 0	0 0	0 0	0 0	0 0	0 0
Reduct Vol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
FinalVolume:	24 61	0 61	2 2	5 0	92 0	0 0	0 0	0 0	0 0	0 0	0 0

Critical Gap Module:

Critical Gp:	4.1 xxxxx xxxxx xxxxx xxxxx xxxxx	6.4 6.5	6.2 xxxxx xxxxx xxxxx
FollowUpTim:	2.2 xxxxx xxxxx xxxxx xxxxx xxxxx	3.5 4.0	3.3 xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol:	63 xxxxx xxxxx xxxxx xxxxx xxxxx	171 171	62 xxxxx xxxxx xxxxx
Potent Cap.:	1540 xxxxx xxxxx xxxxx xxxxx xxxxx	819 722 1003	xxxxx xxxxx xxxxx
Move Cap.:	1540 xxxxx xxxxx xxxxx xxxxx xxxxx	810 711 1003	xxxxx xxxxx xxxxx
Volume/Cap:	0.02 xxxxx xxxxx xxxxx xxxxx xxxxx	0.01 0.00 0.09	xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ:	1.2 xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Control Del:	7.4 xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxxx xxxxx xxxxx
LOS by Move:	A * * * * *	* * * * *	* * * * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx 990 xxxxx	xxxxx xxxxx xxxxx
SharedQueue:	0.0 xxxxx xxxxx xxxxx xxxxx xxxxx	0.3 xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shrd ConDel:	7.4 xxxxx xxxxx xxxxx xxxxx xxxxx	9.0 xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shared LOS:	A * * * * *	A * * * * *	* * * * *
ApproachDel:	xxxxxx	xxxxxx	9.0 xxxxxx
ApproachLOS:	*	*	A *

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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*****
Intersection #24 Ham Ln & E Project Driveway
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HevVeh:         2%          2%          2%          2%
Grade:          0%          0%          0%          0%
Peds/Hour:      0            0            0            0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet      12 feet      12 feet      12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index:          #96
Dist(miles):        0.250
Speed (mph):        1.00
SignalIndex:        #6
Cycle Time:         100 secs
InitVolume:         34      2
Saturation:         1769  359
ArrivalType:        4      4
G/C:                0.09  0.14
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:                  0.116  0.188
gq1:                1.70  0.45
gq2:                0.04  0.00
gq:                 1.74  0.46
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:              0.550
beta:               0.645
ta (secs):          900.000
F:                  0.003
f:                  1.000  1.000
vcmax:              10      1
vcg:                10      1
vcmin:              1000  1000
tp:                 0.0    0.0
p:                  0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:         0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol: 63 xxxxx xxxxx 0 xxxxx xxxxx 171 171 62 217 172 61
AdjCnflVol: 63 xxxxx xxxxx 0 xxxxx xxxxx 171 171 62 217 172 61
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol: 63 xxxxx xxxxx 0 xxxxx xxxxx 171 171 62 217 172 61
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 1540 xxxxx xxxxx 1623 xxxxx xxxxx 819 722 1003 740 721 1004
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
Potent Cap.:1540 xxxxx xxxxx 1623 xxxxx xxxxx 819 722 1003 740 721 1004

```

Cumulative Plus Project PM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	24	88	251	185	87	45	101	419	18	322	267	267
#4 [HCM2k95thQ]:	192	271	236	36	381	228	152	361	304	230	339	339
#5 [HCM2k95thQ]:	18	391	34	314	180	39	126	95	4	82	273	390
#6 [HCM2k95thQ]:	0	83	83	14	14	14	21	67	67	64	12	12
#7 [HCM2k95thQ]:	172	286	356	54	248	33	93	285	364	294	275	275
#8 [HCM2k95thQ]:	179	251	484	311	221	97	181	232	293	354	170	456
#9 [HCM2k95thQ]:	0	0	0	157	0	30	26	63	0	0	114	114
#10 [HCM2k95thQ]:	68	9	103	168	43	43	167	187	187	130	278	278
#11 [HCM2k95thQ]:	159	32	656	70	66	6	19	434	360	432	157	5
#12 [HCM2k95thQ]:	248	539	539	53	46	46	9	422	411	283	352	352
#13 [HCM2k95thQ]:	269	163	163	23	66	66	5	93	224	166	67	67
#20 [HCM2k95thQ]:	262	179	179	96	366	131	232	7	209	254	44	44
#21 [HCM2k95thQ]:	157	0	162	0	0	0	0	263	51	246	27	0
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#23 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	26.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#24 [2Way95thQ]:	1.2	1.2	xxxx	xxxx	xxxx	xxxx	8.2	8.2	8.2	xxxx	xxxx	xxxx

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Scenario Report

Scenario: EPAP No Proj AM
 Command: EPAP No Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Veh	V/C	LOS	Veh	V/C	
# 3 Eight Mile Rd & Davis Rd	D	36.0	0.859	D	36.0	0.859	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	D	37.5	0.912	D	37.5	0.912	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	32.3	0.649	C	32.3	0.649	+ 0.000 D/V
# 6 West Lane & Ham Lane	A	9.1	0.279	A	9.1	0.279	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	E	55.1	1.012	E	55.1	1.012	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	29.1	0.589	C	29.1	0.589	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	D	30.5	0.158	D	30.5	0.158	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	B	13.1	0.499	B	13.1	0.499	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	A	9.5	0.384	A	9.5	0.384	+ 0.000 D/V
# 20 West Lane & Tra Vigne Road B	B	16.6	0.583	B	16.6	0.583	+ 0.000 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	13.3	0.476	B	13.3	0.476	+ 0.000 D/V

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Intersection	Signal Warrant Summary Report	
	Base Met [Del / Vol]	Future Met [Del / Vol]
# 9 Eight Mile Road & Ham Lane	??? / ???	No / No

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

 Intersection #9 Eight Mile Road & Ham Lane

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	17 0 11	8 1081 0	0 806 37
ApproachDel:	xxxxxx	30.5	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.2]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=28]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=3][total volume=1960]
 SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
 This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound and associated signal warrant details.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 2 columns: Metric (Cycle, Loss Time, Optimal Cycle) and Value (100, 12, 93).

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: AM Peak Hour

Large table with 12 columns showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 10 columns showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns showing capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 0 1 0 1 1 0 1 0 2 0 1
Lane Group: L T R L RT RT L RT RT L T R
#LnsInGrps: 1 1 1 1 1 1 1 1 2 2 1 2 1

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0 0 0 0 0 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx 0.96 0.96 xxxx 0.98 0.98 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.94 0.94 0.93 0.96 0.96 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.94 0.94 0.93 0.91 0.91 0.93 0.93 0.83

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > >

DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Green/Cycle: 0.18 0.33 0.33 0.01 0.16 0.16 0.11 0.42 0.42 0.12 0.43 0.43
ArrivalType: 4 4 4 4 4 4 4 4 4 4 4 4
ProgFactor: 0.99 0.86 0.87 1.00 0.99 0.99 0.98 0.93 0.93 0.99 0.85 0.75
Q1: 7.3 2.2 3.3 0.2 6.7 6.7 3.1 15.5 15.5 4.8 8.9 0.1
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 3.7 0.3 0.5 0.4 3.6 3.6 1.4 4.6 4.6 3.2 1.5 0.0
HCM2KQueue: 10.9 2.5 3.8 0.6 10.2 10.2 4.5 20.1 20.1 8.0 10.4 0.1

70th%Factor: 1.18 1.19 1.19 1.20 1.18 1.18 1.19 1.16 1.16 1.18 1.18 1.20
HCM2k70thQ: 12.9 3.0 4.5 0.7 12.1 12.1 5.4 23.3 23.3 9.4 12.2 0.1

85th%Factor: 1.51 1.58 1.56 1.59 1.51 1.51 1.56 1.45 1.45 1.53 1.51 1.60
HCM2k85thQ: 16.5 3.9 5.9 0.9 15.5 15.5 7.0 29.2 29.2 12.2 15.7 0.1

90th%Factor: 1.63 1.75 1.73 1.79 1.64 1.64 1.72 1.55 1.55 1.67 1.64 1.80
HCM2k90thQ: 17.8 4.4 6.5 1.1 16.8 16.8 7.7 31.1 31.1 13.3 17.0 0.2

95th%Factor: 1.83 2.02 1.99 2.08 1.84 1.84 1.97 1.70 1.70 1.88 1.84 2.10
HCM2k95thQ: 20.0 5.0 7.5 1.2 18.8 18.8 8.9 34.1 34.1 15.1 19.1 0.2

98th%Factor: 2.13 2.53 2.45 2.66 2.16 2.16 2.41 1.91 1.91 2.24 2.15 2.69
HCM2k98thQ: 23.3 6.3 9.2 1.6 22.1 22.1 10.8 38.4 38.4 17.9 22.3 0.2

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.912
Loss Time (sec): 12 Average Delay (sec/veh): 37.5
Optimal Cycle: 115 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, and Capacity Analysis Module.

Table showing Volume Module: AM Peak Hour with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table showing Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table showing Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table showing HCM Ops Adjusted Lane Utilization Module with columns for Lanes, Lane Group, and #LnsInGrps.

Table showing HCM Ops Input Saturation Adj Module with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, and % RT Prtct.

Table showing HCM Ops f(lt) Adj Case Module with columns for f(lt) Case.

Table showing HCM Ops Saturation Adj Module with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, and Fnl Sat Adj.

Table showing Delay Adjustment Factor Module with columns for Coordinated and Signal Type.

Table showing DelAdjFctr with columns for DelAdjFctr.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.649
Loss Time (sec): 12 Average Delay (sec/veh): 32.3
Optimal Cycle: 53 Level Of Service: C

Table with columns: Street Name, West Lane, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Control, Rights, Min. Green, Y+R, Lanes.

Table with columns: Volume Module:AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

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*****
Intersection #5 West Lane & Armstrong Road
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         1 0 1 1 0      1 0 1 1 0      0 0 1! 0 0      0 0 1! 0 0
Lane Group:    L  RT      RT      L  RT      RT      LTR  LTR  LTR      LTR  LTR  LTR
#LnsInGrps:   1  2      2      1  2      2      1  1  1      1  1  1
-----|-----|-----|-----|
HCM Ops Input Saturation Adj Module:
Lane Width:    12  12      12      12  12      12      12  12      12  12  12
CrsswalkWid:   8           8           8           8
% Hev Veh:     2           2           2           2
Grade:         0%          0%          0%          0%
Parking/Hr:    No           No           No           No
Bus Stp/Hr:    0           0           0           0
Area Type:    < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr:   0           0           0           0
ExclusiveRT:  Include      Include      Include      Include
% RT Prtct:   0           0           0           0
-----|-----|-----|-----|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:   1 xxxx  xxxx      1 xxxx  xxxx      4  4  4      4  4  4
-----|-----|-----|-----|
HCM Ops Saturation Adj Module:
Ln Wid Adj:   1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Hev Veh Adj:  0.98 0.98  0.98  0.98 0.98  0.98 0.98  0.98 0.98 0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Parking Adj:  xxxx 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00  1.00
Bus Stp Adj:  xxxx 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
RT Adj:     xxxx 0.98  0.98  xxxx 0.99  0.99  1.00 1.00  1.00 0.95 0.95  0.95
LT Adj:     0.95 xxxx  xxxxxx  0.95 xxxx  xxxxxx  0.99 0.99  0.99 0.99 0.99  0.99 0.99  0.99
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.96  0.96  0.93 0.97  0.97 0.97 0.97  0.97 0.92 0.92  0.92
Usr Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
MLF Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95 1.00 1.00  1.00 1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.91  0.91  0.93 0.92  0.92 0.97 0.97  0.97 0.92 0.92  0.92
-----|-----|-----|-----|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type:  < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
*****

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Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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*****
Intersection #5 West Lane & Armstrong Road
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Green/Cycle:   0.01 0.24  0.24  0.19 0.43  0.43  0.20 0.20  0.20  0.24 0.24  0.24
ArrivalType:   4           4           4           4
ProgFactor:    1.00 0.95  0.95  0.97 0.81  0.81  0.96 0.96  0.96  0.95 0.95  0.95
Q1:            0.1  6.8      6.8  5.5 5.2  5.2  5.9 5.9  5.9  6.5 6.5  6.5
UpstreamVC:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:            0.4  1.7      1.7  1.7 0.7  0.7  1.7 1.7  1.7  1.7 1.7  1.7
HCM2KQueue:    0.6  8.5      8.5  7.1 5.9  5.9  7.6 7.6  7.6  8.2 8.2  8.2
-----|-----|-----|-----|
70th%Factor:  1.20 1.18  1.18  1.18 1.19  1.19  1.18 1.18  1.18  1.18 1.18  1.18
HCM2k70thQ:    0.7 10.0  10.0  8.4  7.0  7.0  9.0  9.0  9.0  9.7  9.7  9.7
-----|-----|-----|-----|
85th%Factor:  1.59 1.53  1.53  1.54 1.55  1.55  1.53 1.53  1.53  1.53 1.53  1.53
HCM2k85thQ:    0.9 13.0  13.0  11.0  9.1  9.1  11.7 11.7  11.7  12.6 12.6  12.6
-----|-----|-----|-----|
90th%Factor:  1.79 1.66  1.66  1.68 1.70  1.70  1.67 1.67  1.67  1.67 1.67  1.67
HCM2k90thQ:    1.0 14.1  14.1  12.0 10.0  10.0  12.7 12.7  12.7  13.7 13.7  13.7
-----|-----|-----|-----|
95th%Factor:  2.08 1.87  1.87  1.90 1.93  1.93  1.89 1.89  1.89  1.88 1.88  1.88
HCM2k95thQ:    1.2 15.9  15.9  13.6 11.3  11.3  14.4 14.4  14.4  15.5 15.5  15.5
-----|-----|-----|-----|
98th%Factor:  2.66 2.22  2.22  2.28 2.34  2.34  2.26 2.26  2.26  2.23 2.23  2.23
HCM2k98thQ:    1.5 18.9  18.9  16.2 13.7  13.7  17.2 17.2  17.2  18.4 18.4  18.4

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Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap. (X): 0.279
Loss Time (sec): 9 Average Delay (sec/veh): 9.1
Optimal Cycle: 25 Level Of Service: A

Table with columns for Street Name (Ham Lane, West Lane, West Bound), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Permitted, Protected), Rights (Include), and Min. Green (0 0 0).

Volume Module:AM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module: Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type, DelAdjFctr.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 West Lane & Morada Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.589
Loss Time (sec): 12 Average Delay (sec/veh): 29.1
Optimal Cycle: 47 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, and four Bound types (North, South, East, West). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, and four Bound types (North, South, East, West). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D [30.5]

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 1 1 0 0

Volume Module:AM Peak Hour

Base Vol: 0 0 0 17 0 11 8 1081 0 0 806 37

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 17 0 11 8 1081 0 0 806 37

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 17 0 11 8 1081 0 0 806 37

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 18 0 12 9 1175 0 0 876 40

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 18 0 12 9 1175 0 0 876 40

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.8 6.5 6.9 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1447 2055 366 841 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 118 53 609 763 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 117 52 609 763 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.16 0.00 0.02 0.01 xxxx xxxxx xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.9 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.8 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx 171 xxxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx 0.6 xxxxx 0.0 xxxx xxxxx xxxx xxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx 30.5 xxxxx 9.8 xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * * * * * D * * * * *

ApproachDel: xxxxxx 30.5 xxxxxxx xxxxxxx

ApproachLOS: * D * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.499

Loss Time (sec): 12 Average Delay (sec/veh): 13.1

Optimal Cycle: 41 Level Of Service: B

Street Name: Leach Road Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0

Volume Module:AM Peak Hour

Base Vol: 70 5 81 25 5 6 75 1108 24 27 760 6

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 70 5 81 25 5 6 75 1108 24 27 760 6

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 70 5 81 25 5 6 75 1108 24 27 760 6

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 76 5 88 27 5 7 82 1204 26 29 826 7

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 76 5 88 27 5 7 82 1204 26 29 826 7

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 76 5 88 27 5 7 82 1204 26 29 826 7

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.84 0.84 0.93 0.90 0.90 0.93 0.93 0.93 0.93

Lanes: 1.00 0.06 0.94 1.00 0.45 0.55 1.00 1.96 0.04 1.00

Final Sat.: 1769 93 1506 1769 777 932 1769 3452 75 1769

Capacity Analysis Module:

Vol/Sat: 0.04 0.06 0.06 0.02 0.01 0.01 0.05 0.35 0.35 0.02

Crit Moves: **** * 0.24 0.24

Green/Cycle: 0.13 0.12 0.12 0.03 0.02 0.02 0.12 0.70 0.70 0.03

Volume/Cap: 0.34 0.50 0.50 0.50 0.34 0.34 0.38 0.50 0.50 0.50

Delay/Veh: 40.7 43.5 43.5 54.7 53.9 53.9 41.8 7.1 7.1 54.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 40.7 43.5 43.5 54.7 53.9 53.9 41.8 7.1 7.1 54.0

LOS by Move: D D D D D D D A A D A A

HCM2k95thQ: 120 165 165 79 40 40 111 153 153 83 192 192

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1	0	1	1	0
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT	
#LnsInGrps:	1	1	1	1	1	1	1	2	2	1	2	2	1	2	2	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8			8		
% Hev Veh:		2			2			2			2			2		
Grade:		0%			0%			0%			0%			0%		
Parking/Hr:		No			No			No			No			No		
Bus Stp/Hr:		0			0			0			0			0		
Area Type:	<	<	<	<	<	<	<	<	<	Other	>	>	>	>	>	>
>																
Cnft Ped/Hr:		0			0			0			0			0		
ExclusiveRT:		Include			Include			Include			Include			Include		
% RT Prtct:		0			0			0			0			0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.86	0.86	xxxx	0.92	0.92	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.84	0.84	0.93	0.90	0.90	0.93	0.98	0.98	0.93	0.98	0.98	0.93	0.98	0.98	0.98
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Fnl Sat Adj:	0.93	0.84	0.84	0.93	0.90	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Delay Adjustment Factor Module:																
Coordinated:	<	<	<	<	<	<	<	<	<	No	>	>	>	>	>	>
>																
Signal Type:	<	<	<	<	<	<	<	<	<	Actuated	>	>	>	>	>	>
>																
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle: 0.13 0.12 0.12 0.03 0.02 0.02 0.12 0.70 0.70 0.03 0.61 0.61												
ArrivalType:		4			4			4			4	
ProgFactor:	0.97	0.98	0.98	0.99	1.00	1.00	0.97	0.28	0.28	0.99	0.53	0.53
Q1:	1.9	2.4	2.4	0.7	0.3	0.3	2.0	2.3	2.3	0.8	3.3	3.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.48	0.48	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	0.25	0.75	0.75	1.00	1.00	1.00
Q2:	0.5	0.9	0.9	0.8	0.4	0.4	0.2	0.7	0.7	0.8	0.6	0.6
HCM2KQueue:	2.4	3.3	3.3	1.5	0.8	0.8	2.2	3.0	3.0	1.6	3.9	3.9
70th%Factor: 1.19 1.19 1.19 1.20 1.20 1.20 1.19 1.19 1.19 1.20 1.19 1.19												
HCM2k70thQ:	2.8	3.9	3.9	1.8	0.9	0.9	2.6	3.6	3.6	1.9	4.6	4.6
85th%Factor: 1.58 1.57 1.57 1.58 1.59 1.59 1.58 1.57 1.57 1.58 1.56 1.56												
HCM2k85thQ:	3.7	5.2	5.2	2.4	1.2	1.2	3.4	4.8	4.8	2.6	6.1	6.1
90th%Factor: 1.76 1.74 1.74 1.77 1.78 1.78 1.76 1.74 1.74 1.77 1.73 1.73												
HCM2k90thQ:	4.1	5.7	5.7	2.7	1.4	1.4	3.8	5.3	5.3	2.9	6.7	6.7
95th%Factor: 2.03 2.00 2.00 2.05 2.07 2.07 2.03 2.01 2.01 2.05 1.98 1.98												
HCM2k95thQ:	4.8	6.6	6.6	3.2	1.6	1.6	4.4	6.1	6.1	3.3	7.7	7.7
98th%Factor: 2.53 2.48 2.48 2.59 2.64 2.64 2.55 2.49 2.49 2.58 2.44 2.44												
HCM2k98thQ:	6.0	8.2	8.2	4.0	2.0	2.0	5.6	7.6	7.6	4.2	9.5	9.5

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Eight Mile & MickeGrove/Holman

Cycle (sec): 100 Critical Vol./Cap.(X): 0.384
Loss Time (sec): 12 Average Delay (sec/veh): 9.5
Optimal Cycle: 34 Level Of Service: A

Street Name: Micke Grove Road/Holman Road East Bound West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 2 0 1

Volume Module:AM Peak Hour

Base Vol: 32 5 5 6 5 39 72 939 89 5 738 7
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 32 5 5 6 5 39 72 939 89 5 738 7
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 32 5 5 6 5 39 72 939 89 5 738 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 35 5 5 7 5 42 78 1021 97 5 802 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 35 5 5 7 5 42 78 1021 97 5 802 8
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 35 5 5 7 5 42 78 1021 97 5 802 8

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.93 0.83 0.93 0.93 0.83
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1769 1862 1583 1769 1862 1583 1769 3538 1583 1769 3538 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.00 0.00 0.00 0.03 0.04 0.29 0.06 0.00 0.23 0.00
Crit Moves: **** **** ****
Green/Cycle: 0.05 0.06 0.06 0.06 0.07 0.07 0.12 0.75 0.75 0.01 0.64 0.64
Volume/Cap: 0.38 0.05 0.06 0.06 0.04 0.38 0.36 0.38 0.08 0.38 0.36 0.01
Delay/Veh: 48.6 44.7 44.8 44.3 43.5 46.7 41.2 4.4 3.3 65.8 8.7 6.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 48.6 44.7 44.8 44.3 43.5 46.7 41.2 4.4 3.3 65.8 8.7 6.7
LOS by Move: D D D D D D D A A E A A
HCM2k95thQ: 77 10 11 12 9 87 125 32 5 9 148 2

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 2 0 1 1 0 2 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 1 1 1 1 1 1 1 2 1 1 2 1

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table with columns for Street Name, Approach, Movement, Control, Rights, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module and rows for various traffic metrics like Cycle, Loss Time, Critical Vol./Cap., etc.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 1 0 0 0 1
Lane Group: xxxx T R L T xxxx xxxx xxxx L xxxx R
#LnsInGrps: 0 2 1 1 2 0 0 0 0 1 0 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2
Grade: 0% 0%
Parking/Hr: No No
Bus Stp/Hr: 0 0
Area Type: <<<<<<<<<<<<<< Other >>>>>>>>>>>>>>>>>>>
Cnft Ped/Hr: 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: xxxx xxxx xxxx 1 xxxx xxxx xxxx xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
Hev Veh Adj: xxxx 0.98 0.98 0.98 0.98 xxxxxx xxxx xxxx xxxxxx 0.98 xxxx 0.98
Grade Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
Parking Adj: xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxx xxxx xxxxxx xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx 1.00 xxxxxx xxxx xxxx xxxxxx xxxx xxxx 1.00
Area Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 0.85
LT Adj: xxxx xxxx xxxxxx 0.95 xxxx xxxxxx xxxx xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 0.95 1.00 1.00 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Delay Adjustment Factor Module:
Coordinated: <<<<<<<<<<<<<< No >>>>>>>>>>>>>>>>>>>
Signal Type: <<<<<<<<<<<< Actuated >>>>>>>>>>>>>>>>>>>
DelAdjFctr: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.00 0.53 0.53 0.06 0.59 0.00 0.00 0.00 0.00 0.32 0.00 0.32
ArrivalType: 4 4
ProgFactor: 1.00 0.70 0.63 0.99 0.63 1.00 1.00 1.00 1.00 0.91 1.00 0.85
Q1: 0.0 6.0 0.8 1.3 7.0 0.0 0.0 0.0 0.0 7.0 0.0 0.2
UpstreamVC: 0.00 0.59 0.59 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.78 0.78 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 0.00 0.57 0.52 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Q2: 0.0 0.5 0.1 0.9 1.4 0.0 0.0 0.0 0.0 1.3 0.0 0.0
HCM2KQueue: 0.0 6.6 0.8 2.2 8.4 0.0 0.0 0.0 0.0 8.3 0.0 0.3
70th%Factor: 1.20 1.18 1.20 1.19 1.18 1.20 1.20 1.20 1.20 1.18 1.20 1.20
HCM2k70thQ: 0.0 7.8 1.0 2.6 9.9 0.0 0.0 0.0 0.0 9.9 0.0 0.3
85th%Factor: 1.60 1.54 1.59 1.58 1.53 1.60 1.60 1.60 1.60 1.53 1.60 1.60
HCM2k85thQ: 0.0 10.1 1.3 3.4 12.8 0.0 0.0 0.0 0.0 12.7 0.0 0.4
90th%Factor: 1.80 1.69 1.78 1.76 1.66 1.80 1.80 1.80 1.80 1.66 1.80 1.79
HCM2k90thQ: 0.0 11.1 1.4 3.8 14.0 0.0 0.0 0.0 0.0 13.9 0.0 0.5
95th%Factor: 2.10 1.92 2.07 2.03 1.88 2.10 2.10 2.10 2.10 1.88 2.10 2.09
HCM2k95thQ: 0.0 12.6 1.7 4.4 15.7 0.0 0.0 0.0 0.0 15.7 0.0 0.6
98th%Factor: 2.70 2.30 2.64 2.55 2.22 2.70 2.70 2.70 2.70 2.23 2.70 2.68
HCM2k98thQ: 0.0 15.1 2.1 5.5 18.7 0.0 0.0 0.0 0.0 18.6 0.0 0.7

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Cycle (sec): 100 Critical Vol./Cap.(X): 0.476
Loss Time (sec): 9 Average Delay (sec/veh): 13.3
Optimal Cycle: 33 Level Of Service: B

Street Name: Tra Vigne Road C Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0

Volume Module:AM Peak Hour

Base Vol: 74 0 126 0 0 0 0 0 899 38 115 817 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 74 0 126 0 0 0 0 0 899 38 115 817 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 74 0 126 0 0 0 0 0 899 38 115 817 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 80 0 137 0 0 0 0 0 977 41 125 888 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 80 0 137 0 0 0 0 0 977 41 125 888 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 80 0 137 0 0 0 0 0 977 41 125 888 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 0.83 0.93 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 1583 1769 3538 0

Capacity Analysis Module:

Vol/Sat: 0.05 0.00 0.09 0.00 0.00 0.00 0.00 0.28 0.03 0.07 0.25 0.00
Crit Moves: ****
Green/Cycle: 0.18 0.00 0.18 0.00 0.00 0.00 0.00 0.58 0.58 0.15 0.73 0.00
Volume/Cap: 0.25 0.00 0.48 0.00 0.00 0.00 0.00 0.48 0.05 0.48 0.34 0.00
Delay/Veh: 35.5 0.0 37.9 0.0 0.0 0.0 0.0 12.4 9.1 40.4 5.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.5 0.0 37.9 0.0 0.0 0.0 0.0 12.4 9.1 40.4 5.0 0.0
LOS by Move: D A D A A A A B A D A A
HCM2k95thQ: 108 0 204 0 0 0 0 0 291 17 167 52 0

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0
Lane Group: L xxxx R xxxx xxxx xxxx xxxx T R L T xxxx
#LnsInGrps: 1 0 1 0 0 0 0 0 2 1 1 2 0

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx xxxx xxxx xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx 0.98 xxxx xxxx xxxxx xxxx 0.98 0.98 0.98 0.98 xxxxx
Grade Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxx
Parking Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx xxxxx xxxx xxxx 1.00 xxxx 1.00 xxxxx
Area Adj: 1.00 xxxx 1.00 xxxx xxxx xxxxx xxxx 1.00 1.00 1.00 1.00 xxxxx
RT Adj: xxxx xxxx 0.85 xxxx xxxx xxxxx xxxx xxxx 0.85 xxxx xxxx xxxxx
LT Adj: 0.95 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.98 0.83 0.93 0.98 1.00
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 1.00
Fnl Sat Adj: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 0.83 0.93 0.93 1.00

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >

DelAdjPctr: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various intersection factors like 70th, 85th, 90th, 95th, 98th.

Existing Plus Approved Projects No Proposed Project AM Peak Hour

Future Queue Length Report (feet)

Table with columns for Node Intersection, Northbound, Southbound, Eastbound, Westbound and rows for intersections #3 through #21.

 Existing Plus Approved Projects No Proposed Project PM Peak Hour

Scenario Report

Scenario: EPAP No Proj PM
 Command: EPAP No Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects No Proposed Project PM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base			Future			Change in
	LOS	Veh	C	LOS	Veh	C	
# 3 Eight Mile Rd & Davis Rd	C	30.5	0.847	C	30.5	0.847	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	D	42.4	0.964	D	42.4	0.964	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	33.1	0.731	C	33.1	0.731	+ 0.000 D/V
# 6 West Lane & Ham Lane	A	5.1	0.271	A	5.1	0.271	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	E	70.1	1.064	E	70.1	1.064	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	27.2	0.663	C	27.2	0.663	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	D	33.3	0.163	D	33.3	0.163	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	B	15.0	0.506	B	15.0	0.506	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	B	11.5	0.492	B	11.5	0.492	+ 0.000 D/V
# 20 West Lane & Tra Vigne Road B	B	11.2	0.567	B	11.2	0.567	+ 0.000 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	13.3	0.530	B	13.3	0.530	+ 0.000 D/V

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 9 Eight Mile Road & Ham Lane	???	???	No / No

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	11 0 18	6 1107 0	0 1089 31
ApproachDel:	xxxxxx	33.3	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2262]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Initial Vol, Major Street Volume, Minor Approach Volume, and Minor Approach Volume Threshold.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 2 columns: Metric (Cycle, Loss Time, Optimal Cycle) and Value (100, 12, 90).

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes.

Volume Module: PM Peak Hour

Large table with 10 columns showing various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, etc.

Saturation Flow Module:

Table with 10 columns showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 10 columns showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
 2000 HCM Operations Method
 Future Volume Alternative

 Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1	0	2	0	1
Lane Group:	L	T	R	L	RT	RT	L	RT	RT	L	T	R				
#LnsInGrps:	1	1	1	1	1	1	1	2	2	1	2	1				
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12				
CrsSwalkWid:	8			8			8			8						
% Hev Veh:	2			2			2			2						
Grade:	0%			0%			0%			0%						
Parking/Hr:	No			No			No			No						
Bus Stp/Hr:	0			0			0			0						
Area Type:	< < < < < < < < < < < Other > > > > > > > > > > >															
Cnft Ped/Hr:	0			0			0			0						
ExclusiveRT:	Include			Include			Include			Include						
% RT Prtct:	0			0			0			0						
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx				
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98				
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00				
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00				
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
RT Adj:	xxxx	xxxx	0.85	xxxx	0.92	0.92	xxxx	0.97	0.97	xxxx	xxxx	0.85				
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx				
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.90	0.90	0.93	0.95	0.95	0.93	0.98	0.83				
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00				
Fnl Sat Adj:	0.93	0.98	0.83	0.93	0.90	0.90	0.93	0.90	0.90	0.93	0.93	0.83				
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < No > > > > > > > > > > >															
Signal Type:	< < < < < < < < < Actuated > > > > > > > > > > >															
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
 2000 HCM Operations Method
 Future Volume Alternative

 Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.13	0.27	0.27	0.02	0.16	0.16	0.08	0.52	0.52	0.07	0.51	0.51
ArrivalType:	4			4			4			4		
ProgFactor:	0.99	0.89	0.90	0.99	0.99	0.99	0.99	0.86	0.86	1.00	0.80	0.66
Q1:	5.2	1.8	2.1	0.2	6.1	6.1	2.8	16.5	16.5	2.8	11.1	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	3.2	0.2	0.3	0.3	3.4	3.4	1.7	4.5	4.5	2.6	2.2	0.0
HCM2KQueue:	8.4	2.0	2.4	0.5	9.5	9.5	4.5	20.9	20.9	5.4	13.3	0.0
70th%Factor:	1.18	1.20	1.19	1.20	1.18	1.18	1.19	1.16	1.16	1.19	1.17	1.20
HCM2k70thQ:	9.9	2.4	2.9	0.7	11.2	11.2	5.4	24.3	24.3	6.4	15.6	0.0
85th%Factor:	1.53	1.58	1.58	1.59	1.52	1.52	1.56	1.45	1.45	1.55	1.49	1.60
HCM2k85thQ:	12.8	3.1	3.8	0.9	14.4	14.4	7.0	30.3	30.3	8.4	19.8	0.1
90th%Factor:	1.66	1.76	1.75	1.79	1.65	1.65	1.72	1.54	1.54	1.71	1.61	1.80
HCM2k90thQ:	14.0	3.5	4.2	1.0	15.7	15.7	7.7	32.3	32.3	9.2	21.3	0.1
95th%Factor:	1.88	2.04	2.02	2.08	1.85	1.85	1.97	1.69	1.69	1.94	1.79	2.10
HCM2k95thQ:	15.8	4.1	4.9	1.1	17.6	17.6	8.9	35.3	35.3	10.5	23.7	0.1
98th%Factor:	2.22	2.56	2.53	2.66	2.18	2.18	2.41	1.90	1.90	2.36	2.06	2.70
HCM2k98thQ:	18.7	5.1	6.1	1.4	20.8	20.8	10.8	39.8	39.8	12.7	27.4	0.1

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.964
Loss Time (sec): 12 Average Delay (sec/veh): 42.4
Optimal Cycle: 150 Level Of Service: D

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 0 1 1 0 1 0 1 1 0 2 0 1

Volume Module:PM Peak Hour
Base Vol: 49 372 406 78 334 112 98 1084 22 434 1184 57
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 49 372 406 78 334 112 98 1084 22 434 1184 57
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 49 372 406 78 334 112 98 1084 22 434 1184 57
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 53 404 441 85 363 122 107 1178 24 472 1287 62
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 404 441 85 363 122 107 1178 24 472 1287 62
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 53 404 441 85 363 122 107 1178 24 472 1287 62

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 3538 1862 1583 1769 1862 1583 1769 3724 1583 1769 3724 1583

Capacity Analysis Module:
Vol/Sat: 0.02 0.22 0.28 0.05 0.19 0.08 0.06 0.32 0.02 0.27 0.35 0.04
Crit Moves: ****
Green/Cycle: 0.02 0.23 0.50 0.05 0.26 0.26 0.09 0.33 0.33 0.28 0.52 0.52
Volume/Cap: 0.76 0.96 0.56 0.96 0.76 0.30 0.67 0.96 0.05 0.96 0.67 0.08
Delay/Veh: 87.3 72.8 18.1 131.1 41.7 30.5 54.7 50.7 22.9 67.1 18.9 12.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 87.3 72.8 18.1 131.1 41.7 30.5 54.7 50.7 22.9 67.1 18.9 12.3
LOS by Move: F E B F D C D D C E B B
HCM2k95thQ: 108 747 363 263 530 146 220 967 22 830 555 34

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 1 0 1 1 0 1 0 1 1 0 2 0 1 1 0 2 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 2 1 1 1 1 1 1 2 1 1 2 1

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%

Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >

>

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > > >
>

>

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
>

DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 12 Average Delay (sec/veh): 33.1
Optimal Cycle: 64 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane
Cycle (sec): 100 Critical Vol./Cap. (X): 0.271
Loss Time (sec): 9 Average Delay (sec/veh): 5.1
Optimal Cycle: 25 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Table with columns for Approach, Movement, Lane Group, #LnsInGrps, HCM Ops Adjusted Lane Utilization Module.

Table with columns for HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table with columns for HCM Ops f(lt) Adj Case Module, f(lt) Case, HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Frl Sat Adj.

Table with columns for Delay Adjustment Factor Module, Coordinated, Signal Type, DelAdjPctr.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.064
Loss Time (sec): 12 Average Delay (sec/veh): 70.1
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Table with columns for Volume Module: PM Peak Hour. Rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module. Rows for Lanes, Lane Group, #LnsInGrps.

Table with columns for HCM Ops Input Saturation Adj Module. Rows for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusionRT, % RT Prtct.

Table with columns for HCM Ops f(lt) Adj Case Module. Rows for f(lt) Case.

Table with columns for HCM Ops Saturation Adj Module. Rows for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with columns for Delay Adjustment Factor Module. Rows for Coordinated, Signal Type.

Table with columns for DelAdjPctr. Rows for DelAdjPctr.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 West Lane & Morada Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.663
Loss Time (sec): 12 Average Delay (sec/veh): 27.2
Optimal Cycle: 55 Level Of Service: C

Table with columns: Street Name, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Control, Rights, Min. Green, Y+R, Lanes.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D[33.3]

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 1 1 0 0

Volume Module:PM Peak Hour

Table with 12 columns for traffic volume and delay metrics across four approaches.

Critical Gap Module:

Table showing critical gap values for different movements.

Capacity Module:

Table showing capacity metrics like conflict volume and potential capacity.

Level Of Service Module:

Table showing level of service calculations for 2-way and shared queue scenarios.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506

Loss Time (sec): 12 Average Delay (sec/veh): 15.0

Optimal Cycle: 41 Level Of Service: B

Street Name: Leach Road Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:PM Peak Hour

Table with 12 columns for traffic volume and delay metrics across four approaches.

Saturation Flow Module:

Table showing saturation flow values for different movements.

Capacity Analysis Module:

Table showing capacity analysis metrics like volume/capacity and delay per vehicle.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT
#LnsInGrps:	1	1	1	1	1	1	1	2	2	1	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	<<<<<<<<<<<<<<<<< Other >>>>>>>>>>>>>>>>>>>>>>>>>>>>											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.86	0.86	xxxx	0.93	0.93	xxxx	0.99	0.99	xxxx	1.00	1.00
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.84	0.84	0.93	0.91	0.91	0.93	0.97	0.97	0.93	0.98	0.98
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fnl Sat Adj:	0.93	0.84	0.84	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.93	0.93
Delay Adjustment Factor Module:												
Coordinated:	<<<<<<<<<<<<<<<<< No >>>>>>>>>>>>>>>>>>>>>>>>>>>>											
Signal Type:	<<<<<<<<<<<<<<<<< Actuated >>>>>>>>>>>>>>>>>>>>>>>>>>>>											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.12	0.12	0.12	0.02	0.02	0.02	0.10	0.63	0.63	0.11	0.64	0.64
ArrivalType:	4			4			4			4		
ProgFactor:	0.97	0.98	0.98	1.00	1.00	1.00	0.98	0.51	0.51	0.98	0.48	0.48
Q1:	1.9	2.4	2.4	0.6	0.3	0.3	2.3	4.2	4.2	2.4	4.2	4.2
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.53	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.83	0.83	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	0.21	0.67	0.67	1.00	1.00	1.00
Q2:	0.5	0.9	0.9	0.8	0.5	0.5	0.2	0.6	0.6	0.9	1.0	1.0
HCM2KQueue:	2.4	3.3	3.3	1.3	0.8	0.8	2.5	4.9	4.9	3.3	5.3	5.3
70th%Factor:	1.19	1.19	1.19	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	2.9	4.0	4.0	1.6	0.9	0.9	3.0	5.8	5.8	4.0	6.2	6.2
85th%Factor:	1.58	1.57	1.57	1.59	1.59	1.59	1.58	1.56	1.56	1.57	1.55	1.55
HCM2k85thQ:	3.8	5.2	5.2	2.1	1.2	1.2	3.9	7.6	7.6	5.2	8.2	8.2
90th%Factor:	1.75	1.74	1.74	1.77	1.79	1.79	1.75	1.71	1.71	1.74	1.71	1.71
HCM2k90thQ:	4.2	5.8	5.8	2.4	1.4	1.4	4.4	8.3	8.3	5.8	9.0	9.0
95th%Factor:	2.02	2.00	2.00	2.06	2.08	2.08	2.02	1.96	1.96	2.00	1.95	1.95
HCM2k95thQ:	4.9	6.7	6.7	2.8	1.6	1.6	5.0	9.5	9.5	6.6	10.2	10.2
98th%Factor:	2.53	2.47	2.47	2.60	2.64	2.64	2.53	2.39	2.39	2.47	2.37	2.37
HCM2k98thQ:	6.1	8.2	8.2	3.5	2.0	2.0	6.3	11.6	11.6	8.2	12.4	12.4

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #20 West Lane & Tra Vigne Road B, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Capacity Analysis Module, and LOS by Move.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #21, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, and various intersection factors (70th, 85th, 90th, 95th, 98th).

Existing Plus Approved Projects No Proposed Project PM Peak Hour

Future Queue Length Report (feet)

Table with columns: Node Intersection, Northbound, Southbound, Eastbound, Westbound. Rows list intersections #3 through #21 with queue length data for L, T, R directions.

 Existing Plus Approved Projects No Proposed Project AM Peak Hour
 With Recommended Improvements

Scenario Report

Scenario: EPAP No Proj AM
 Command: EPAP No Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects No Proposed Project AM Peak Hour
 With Recommended Improvements

Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 7 West Lane & Eight Mile Road	D 37.1	0.853	D 37.1	0.853	+ 0.000 D/V

Existing Plus Approved Projects No Proposed Project AM Peak Hour
With Recommended Improvements

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		

Existing Plus Approved Projects No Proposed Project AM Peak Hour
With Recommended Improvements

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.853
Loss Time (sec): 12 Average Delay (sec/veh): 37.1
Optimal Cycle: 91 Level Of Service: D

Street Name: West Lane Eight Mile Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	0	2	0	1	1	0

Volume Module:AM Peak Hour

Base Vol:	456	284	99	43	449	185	194	799	554	161	712	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	456	284	99	43	449	185	194	799	554	161	712	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	456	284	99	43	449	185	194	799	554	161	712	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	496	309	108	47	488	201	211	868	602	175	774	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	496	309	108	47	488	201	211	868	602	175	774	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	496	309	108	47	488	201	211	868	602	175	774	23

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3538	3724	1583	1769	3724	1583	1769	3724	1583	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.14	0.08	0.07	0.03	0.13	0.13	0.12	0.23	0.38	0.10	0.21	0.01
Crit Moves:	****			****					****	****		
Green/Cycle:	0.16	0.24	0.24	0.08	0.15	0.15	0.20	0.45	0.45	0.12	0.36	0.36
Volume/Cap:	0.85	0.34	0.28	0.34	0.85	0.83	0.58	0.52	0.85	0.85	0.58	0.04
Delay/Veh:	52.3	31.6	31.3	45.3	53.0	61.3	38.3	20.3	34.6	70.8	26.7	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.3	31.6	31.3	45.3	53.0	61.3	38.3	20.3	34.6	70.8	26.7	21.0
LOS by Move:	D	C	C	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	466	188	132	87	462	393	306	384	778	372	425	20

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project AM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project AM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report (HCM2000 Queue Method) 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

 Existing Plus Approved Projects No Proposed Project AM Peak Hour
 With Recommended Improvements

 Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#7 [HCM2k95thQ]:	466	188	132	87	462	393	306	384	778	372	425	20

 Existing Plus Approved Projects No Proposed Project PM Peak Hour
 With Recommended Improvements

Scenario Report

Scenario: EPAP No Proj PM
 Command: EPAP No Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects No Proposed Project PM Peak Hour
 With Recommended Improvements

Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 7 West Lane & Eight Mile Road	D 39.8	0.864	D 39.8	0.864	+ 0.000 D/V

Existing Plus Approved Projects No Proposed Project PM Peak Hour
With Recommended Improvements

Intersection	Signal Warrant Summary Report		Future Met	
	Base Met		[Del / Vol]	[Del / Vol]

Existing Plus Approved Projects No Proposed Project PM Peak Hour
With Recommended Improvements

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.864
Loss Time (sec): 12 Average Delay (sec/veh): 39.8
Optimal Cycle: 95 Level Of Service: D

Street Name: West Lane Eight Mile Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	1	0	2	0	1	1

Volume Module: PM Peak Hour

Base Vol:	573	394	127	38	325	204	264	857	496	161	967	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	573	394	127	38	325	204	264	857	496	161	967	13
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	573	394	127	38	325	204	264	857	496	161	967	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	623	428	138	41	353	222	287	932	539	175	1051	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	623	428	138	41	353	222	287	932	539	175	1051	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	623	428	138	41	353	222	287	932	539	175	1051	14

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3538	3724	1583	1769	3724	1583	1769	3724	1583	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.18	0.12	0.09	0.02	0.09	0.14	0.16	0.25	0.34	0.10	0.28	0.01
Crit Moves:	****					****	****			****		
Green/Cycle:	0.20	0.30	0.30	0.06	0.16	0.16	0.19	0.40	0.40	0.12	0.33	0.33
Volume/Cap:	0.86	0.38	0.29	0.38	0.59	0.86	0.86	0.63	0.85	0.85	0.86	0.03
Delay/Veh:	49.1	27.6	26.9	47.3	40.3	65.7	59.7	25.0	38.5	71.2	38.3	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.1	27.6	26.9	47.3	40.3	65.7	59.7	25.0	38.5	71.2	38.3	22.9
LOS by Move:	D	C	C	D	D	E	E	C	D	E	D	C
HCM2k95thQ:	547	234	150	85	276	439	519	490	742	373	762	13

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects No Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, Area Type, and Delay Adjustment Factor Module.

Existing Plus Approved Projects No Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report (HCM2000 Queue Method) 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70th%Factor, HCM2k70thQ, 85th%Factor, HCM2k85thQ, 90th%Factor, HCM2k90thQ, 95th%Factor, HCM2k95thQ, 98th%Factor, HCM2k98thQ.

 Existing Plus Approved Projects No Proposed Project PM Peak Hour
 With Recommended Improvements

 Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#7 [HCM2k95thQ]:	547	234	150	85	276	439	519	490	742	373	762	13

 Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Scenario Report

Scenario: EPAP + Proj AM
 Command: EPAP + Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF	0.61	0.28	22	10	32 9.9
1	Gill Med Ctr	60.00	MedOffBldg	KSF	2.17	0.61	130	37	167 51.7
1	Gill Med Ctr	140.00	Hospital	KSF	0.61	0.28	85	39	124 38.4
Zone 1 Subtotal							237	86	323 100.0
TOTAL							237	86	323 100.0

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Trip Distribution Report

Percent Of Trips EPAP

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	0.2	17.8	5.0	4.7

Zone	To Gates										
	12	13	14	15	17	18	19	20	21	22	23
1	4.5	3.0	15.1	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4

Zone	To Gates	
	24	25
1	0.3	2.2

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	D	36.0 0.859	D	36.8 0.873	+ 0.793 D/V
# 4 Eight Mile & Lower Sacramento	D	37.5 0.912	D	39.9 0.938	+ 2.407 D/V
# 5 West Lane & Armstrong Road	C	32.3 0.649	C	32.4 0.652	+ 0.090 D/V
# 6 West Lane & Ham Lane	A	9.1 0.279	A	10.0 0.280	+ 0.907 D/V
# 7 West Lane & Eight Mile Road	E	55.1 1.012	E	57.8 1.023	+ 2.720 D/V
# 8 West Lane & Morada Lane	C	29.1 0.589	C	29.1 0.609	+ 0.058 D/V
# 9 Eight Mile Road & Ham Lane	D	30.5 0.158	F	59.0 0.469	+28.483 D/V
# 10 Eight Mile Road & Leach Road	B	13.1 0.499	B	13.1 0.509	-0.054 D/V
# 11 Eight Mile & MickeGrove/Holman	A	9.5 0.384	B	10.5 0.402	+ 0.909 D/V
# 20 West Lane & Tra Vigne Road B	B	16.6 0.583	B	16.6 0.588	-0.039 D/V
# 21 Eight Mile Rd & Tra Vigne Rd C	B	13.3 0.476	B	13.6 0.483	+ 0.246 D/V
# 22 West Lane & W Project Driveway	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 23 Eight Mile & S Proj Driveway	A	0.0 0.000	C	18.7 0.182	+18.655 D/V
# 24 Ham Ln & E Project Driveway	A	0.0 0.000	A	8.8 0.031	+ 8.782 D/V

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Signal Warrant Summary Report		
Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 9 Eight Mile Road & Ham Lane	?? / ??	No / No
# 22 West Lane & W Project Driveway	?? / ??	No / No
# 23 Eight Mile & S Proj Driveway	?? / ??	No / No
# 24 Ham Ln & E Project Driveway	?? / ??	No / No

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	45 0 11	13 1081 0	0 844 75
ApproachDel:	xxxxxx	59.0	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.9]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=56]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=2069]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	45 0 11	13 1081 0	0 844 75
Major Street Volume:	2013			
Minor Approach Volume:	56			
Minor Approach Volume Threshold:	44 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 499 142	0 677 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 499 142	0 677 0	0 0 0 0	0 0 0 0
Major Street Volume:	1318			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	190			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 0 54	0 946 0	0 894 38
ApproachDel:	xxxxxx	18.7	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=54]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1932]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 0 54	0 946 0	0 894 38
Major Street Volume:	1878			
Minor Approach Volume:	54			
Minor Approach Volume Threshold:	51 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	44 45 0	0 28 13	5 0 28	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	8.8	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=33]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=163]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound and associated signal warrant details.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound and associated signal warrant details.

Volume Module:AM Peak Hour

Table with 12 columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module:

Table with 10 columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
HCM Ops Adjusted Lane Utilization Module:															
Lanes:	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1
Lane Group:	L	T	R	L	RT	RT	L	RT	RT	L	T	R			
#LnsInGrps:	1	1	1	1	1	1	1	2	2	1	2	1			
HCM Ops Input Saturation Adj Module:															
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12			
CrsswalkWid:	8			8			8			8					
% Hev Veh:	2			2			2			2					
Grade:	0%			0%			0%			0%					
Parking/Hr:	No			No			No			No					
Bus Stp/Hr:	0			0			0			0					
Area Type:	< < < < < < < < < < < < Other > > > > > > > > > > > >														
Cnft Ped/Hr:	0			0			0			0					
ExclusiveRT:	Include			Include			Include			Include					
% RT Prtct:	0			0			0			0					
HCM Ops f(lt) Adj Case Module:															
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx			
HCM Ops Saturation Adj Module:															
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00			
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00			
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
RT Adj:	xxxx	xxxx	0.85	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	0.85			
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx			
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	0.83			
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00			
Fnl Sat Adj:	0.93	0.98	0.83	0.93	0.94	0.94	0.93	0.91	0.91	0.93	0.93	0.83			
Delay Adjustment Factor Module:															
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > >														
Signal Type:	< < < < < < < < < Actuated > > > > > > > > > > > >														
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.18	0.33	0.33	0.01	0.16	0.16	0.11	0.42	0.42	0.12	0.43	0.43
ArrivalType:	4			4			4			4		
ProgFactor:	0.99	0.86	0.88	1.00	0.99	0.99	0.98	0.94	0.94	0.99	0.85	0.75
Q1:	7.3	2.3	3.9	0.2	6.7	6.7	3.1	16.1	16.1	5.0	8.9	0.1
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	3.9	0.3	0.7	0.5	3.8	3.8	1.4	4.9	4.9	3.4	1.5	0.0
HCM2KQueue:	11.2	2.5	4.6	0.7	10.4	10.4	4.5	21.0	21.0	8.5	10.4	0.1
70th%Factor:	1.18	1.19	1.19	1.20	1.18	1.18	1.19	1.16	1.16	1.18	1.18	1.20
HCM2k70thQ:	13.1	3.0	5.4	0.8	12.3	12.3	5.3	24.3	24.3	10.0	12.2	0.1
85th%Factor:	1.51	1.58	1.56	1.59	1.51	1.51	1.56	1.45	1.45	1.53	1.51	1.60
HCM2k85thQ:	16.8	4.0	7.1	1.1	15.8	15.8	7.0	30.4	30.4	12.9	15.7	0.1
90th%Factor:	1.63	1.75	1.72	1.79	1.64	1.64	1.72	1.54	1.54	1.66	1.64	1.80
HCM2k90thQ:	18.2	4.4	7.9	1.3	17.1	17.1	7.7	32.3	32.3	14.1	17.0	0.2
95th%Factor:	1.82	2.02	1.97	2.08	1.84	1.84	1.97	1.69	1.69	1.88	1.84	2.10
HCM2k95thQ:	20.3	5.1	9.0	1.5	19.2	19.2	8.8	35.4	35.4	15.9	19.0	0.2
98th%Factor:	2.12	2.52	2.40	2.65	2.15	2.15	2.41	1.90	1.90	2.22	2.15	2.69
HCM2k98thQ:	23.7	6.4	11.0	1.9	22.4	22.4	10.8	39.8	39.8	18.8	22.3	0.2

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.938
Loss Time (sec): 12 Average Delay (sec/veh): 39.9
Optimal Cycle: 131 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Lower Sacramento Road and Eight Mile Road with North and South Bound movements.

Volume Module:AM Peak Hour

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Values range from 1900 to 1583.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Values range from 0.01 to 51.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table showing HCM Ops Adjusted Lane Utilization Module with columns for Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table showing HCM Ops Input Saturation Adj Module with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExlusiveRT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case. Values include 1 xxxx xxxx.

HCM Ops Saturation Adj Module:

Table showing HCM Ops Saturation Adj Module with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table showing Delay Adjustment Factor Module with columns for Coordinated, Signal Type, DelAdjPctr.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 12 Average Delay (sec/veh): 32.4
Optimal Cycle: 54 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane
Cycle (sec): 100 Critical Vol./Cap. (X): 0.280
Loss Time (sec): 9 Average Delay (sec/veh): 10.0
Optimal Cycle: 25 Level Of Service: A
Street Name: Ham Lane West Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
Volume Module:AM Peak Hour
Base Vol: 1 2 43 34 6 32 4 486 0 17 628 18
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 2 43 34 6 32 4 486 0 17 628 18
Added Vol: 0 1 4 0 2 0 0 0 0 11 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 3 47 34 8 32 4 486 0 28 628 18
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 1 3 51 37 9 35 4 528 0 30 683 20
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 51 37 9 35 4 528 0 30 683 20
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 1 3 51 37 9 35 4 528 0 30 683 20
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.86 0.86 0.80 0.80 0.80 0.93 0.93 0.95 0.93 0.93 0.93
Lanes: 0.02 0.06 0.92 0.46 0.11 0.43 1.00 2.00 0.00 1.00 1.94 0.06
Final Sat.: 32 96 1499 695 163 654 1769 3538 0 1769 3425 98
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.05 0.05 0.05 0.00 0.15 0.00 0.02 0.20 0.20
Crit Moves: **** **** ****
Green/Cycle: 0.19 0.19 0.19 0.19 0.19 0.19 0.01 0.65 0.00 0.07 0.71 0.71
Volume/Cap: 0.18 0.18 0.18 0.28 0.28 0.28 0.28 0.23 0.00 0.23 0.28 0.28
Delay/Veh: 34.3 34.3 34.3 35.2 35.2 35.2 58.9 7.4 0.0 44.5 5.3 5.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 34.3 34.3 34.3 35.2 35.2 35.2 58.9 7.4 0.0 44.5 5.3 5.3
LOS by Move: C C C D D D E A A D A A
HCM2k95thQ: 73 73 73 111 111 111 23 84 0 55 57 57
Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 1 0 0 0 0 1 0 1 1 0 1 0 1 1 0
Lane Group: LTR LTR LTR LTR LTR LTR L RT RT L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 2 2 1 2 2
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 5 5 5 5 5 5 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: 0.88 0.88 0.88 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
LT Adj: 1.00 1.00 1.00 0.86 0.86 0.86 0.95 0.95 0.95 0.95 0.95 0.95
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.86 0.86 0.86 0.80 0.80 0.80 0.93 0.98 1.00 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.86 0.86 0.86 0.80 0.80 0.80 0.93 0.93 0.95 0.93 0.93 0.93
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.023
Loss Time (sec): 12 Average Delay (sec/veh): 57.8
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Volume Module:AM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type.

Table with columns for DelAdjFctr.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method (Future Volume Alternative)

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: F[59.0]

Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 1 1 0 0 0 0 1 1 0
Volume Module:AM Peak Hour
Base Vol: 0 0 0 17 0 11 8 1081 0 0 806 37
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 17 0 11 8 1081 0 0 806 37
Added Vol: 0 0 0 28 0 0 5 0 0 0 38 38
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 45 0 11 13 1081 0 0 844 75
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 49 0 12 14 1175 0 0 917 82
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 49 0 12 14 1175 0 0 917 82
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.8 6.5 6.9 4.1 xxxx xxxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxxx 1514 2126 394 915 xxxx xxxxxx xxxx xxxx xxxxxx
Potent Cap.: xxxx xxxx xxxxxx 106 47 580 711 xxxx xxxxxx xxxx xxxx xxxxxx
Move Cap.: xxxx xxxx xxxxxx 104 46 580 711 xxxx xxxxxx xxxx xxxx xxxxxx
Volume/Cap: xxxx xxxx xxxxx 0.47 0.00 0.02 0.02 xxxx xxxxxx xxxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxxx xxxx xxxx xxxxxx 1.5 xxxx xxxxxx xxxx xxxx xxxxxx
Control Del:xxxxx xxxx xxxxxx xxxxx 124 xxxxxx 10.2 xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxx 124 xxxxxx xxxxx xxxx xxxxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx xxxxxx 2.2 xxxxxx 0.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd ConDel:xxxxx xxxxx xxxxxx xxxxxx 59.0 xxxxxx 10.2 xxxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * * * * * F * * * * * B * * * * *
ApproachDel: xxxxxx 59.0 xxxxxx xxxxxx
ApproachLOS: * * * * * F * * * * *

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113 #108
Dist(miles): 0.250 0.100
Speed (mph): 1.00 25.00
SignalIndex: #21 #10
Cycle Time: 100 secs 100 secs
InitVolume: 0 899 81 826
Saturation: 0 3538 1769 3509
ArrivalType: 0 4 4 4
G/C: 0.00 0.57 0.13 0.62
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
p: 0.000 0.763 0.169 0.830
gq1: 0.00 6.03 3.80 3.99
gq2: 0.00 3.09 0.25 1.83
gq: 0.00 9.12 4.05 5.82
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.400 0.400
beta: 0.714 0.714
ta (secs): 900.000 14.400
F: 0.004 0.196
f: 1.000 1.000 1.000 1.000
vcmax: 0 123 1036 2520
vcg: 0 306 249 1101
vcmin: 2000 2000 2000 2000
tp: 0.0 0.0 0.0 4.0
p: 0.000 0.040
*** Computation 3: Platoon Event Periods
pdom/psub: 0.040/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:1662 2202 588 1574 2161 499 999 xxxxx xxxxx 0 xxxxx xxxxx
AdjCnflVol: 1541 2081 588 1453 2040 378 878 xxxxxx xxxxxx 0 xxxxxx xxxxxx
UpstreamAdj:0.96 0.960 1.000 0.96 0.960 0.960 0.96 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol:1606 2169 588 1514 2126 394 915 xxxxxx xxxxxx 0 xxxxxx xxxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 70 46 453 110 49 605 741 xxxxxx xxxxxx 1622 xxxxxx xxxxxx
UpstreamAdj:0.96 0.960 1.000 0.96 0.960 0.960 0.96 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 67 44 453 106 47 580 711 xxxxxx xxxxxx 1622 xxxxxx xxxxxx

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #11 Eight Mile & MickeGrove/Holman, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and various performance metrics.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 2 0 1 1 0 2 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 1 1 1 1 1 1 1 2 1 1 2 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0 0 0 0 0 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.07 0.07 0.07 0.07 0.07 0.07 0.12 0.73 0.73 0.01 0.62 0.62
ArrivalType: 4 4 4 4 4 4 4 4 4 4 4 4
ProgFactor: 0.99 0.98 0.98 0.98 0.97 0.98 0.97 0.11 0.09 1.00 0.50 0.45
Q1: 1.3 0.1 0.1 0.2 0.1 1.2 2.0 0.6 0.1 0.2 3.1 0.0
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.56 0.56 0.56
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.80 0.80 0.80
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.04 0.65 0.59
Q2: 0.6 0.0 0.1 0.1 0.0 0.6 0.6 0.7 0.1 0.0 0.4 0.0
HCM2KQueue: 1.9 0.2 0.2 0.2 0.2 1.8 2.6 1.3 0.2 0.2 3.5 0.0
70th%Factor: 1.20 1.20 1.20 1.20 1.20 1.20 1.19 1.20 1.20 1.20 1.19 1.20
HCM2k70thQ: 2.3 0.2 0.2 0.3 0.2 2.2 3.1 1.5 0.2 0.2 4.2 0.0
85th%Factor: 1.58 1.60 1.60 1.60 1.60 1.58 1.58 1.59 1.60 1.60 1.57 1.60
HCM2k85thQ: 3.0 0.3 0.3 0.3 0.3 2.9 4.1 2.0 0.3 0.3 5.5 0.1
90th%Factor: 1.76 1.80 1.80 1.80 1.80 1.76 1.75 1.78 1.80 1.80 1.74 1.80
HCM2k90thQ: 3.3 0.3 0.3 0.4 0.3 3.3 4.5 2.3 0.3 0.3 6.1 0.1
95th%Factor: 2.04 2.09 2.09 2.09 2.09 2.04 2.02 2.06 2.09 2.09 1.99 2.10
HCM2k95thQ: 3.8 0.4 0.4 0.5 0.4 3.8 5.2 2.6 0.4 0.4 7.0 0.1
98th%Factor: 2.57 2.69 2.69 2.68 2.69 2.57 2.52 2.61 2.69 2.69 2.46 2.70
HCM2k98thQ: 4.8 0.5 0.5 0.6 0.5 4.7 6.5 3.4 0.5 0.5 8.7 0.1

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 West Lane & Tra Vigne Road B

Cycle (sec): 100 Critical Vol./Cap.(X): 0.588
Loss Time (sec): 9 Average Delay (sec/veh): 16.6
Optimal Cycle: 40 Level Of Service: B

Street Name: West Lane South Bound East Bound West Bound

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:AM Peak Hour

Base Vol: 0 854 80 45 1119 0 0 0 0 304 0 14
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 854 80 45 1119 0 0 0 0 304 0 14
Added Vol: 0 43 0 0 16 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 897 80 45 1135 0 0 0 0 304 0 14
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 975 87 49 1234 0 0 0 0 330 0 15
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 975 87 49 1234 0 0 0 0 330 0 15
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 975 87 49 1234 0 0 0 0 330 0 15

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.28 0.05 0.03 0.35 0.00 0.00 0.00 0.00 0.19 0.00 0.01
Crit Moves: **** ****
Green/Cycle: 0.00 0.54 0.54 0.05 0.59 0.00 0.00 0.00 0.00 0.32 0.00 0.32
Volume/Cap: 0.00 0.51 0.10 0.51 0.59 0.00 0.00 0.00 0.00 0.59 0.00 0.03
Delay/Veh: 0.0 14.9 11.3 50.6 13.2 0.0 0.0 0.0 0.0 30.3 0.0 23.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 14.9 11.3 50.6 13.2 0.0 0.0 0.0 0.0 30.3 0.0 23.5
LOS by Move: A B B D B A A A A C A C
HCM2k95thQ: 0 331 41 112 397 0 0 0 0 395 0 15

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Future Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:

Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 0 0 1
Lane Group: xxxx T R L T xxxx xxxx xxxx xxxx L xxxx R
#LnsInGrps: 0 2 1 1 2 0 0 0 0 1 0 1

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0

ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: xxxx xxxx xxxx 1 xxxx xxxx xxxx xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
Hev Veh Adj: xxxx 0.98 0.98 0.98 0.98 xxxxxx xxxx xxxx xxxxxx 0.98 xxxx 0.98
Grade Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
Parking Adj: xxxx xxxxx 1.00 xxxxx 1.00 xxxxxx xxxx xxxx xxxxxx xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxxx 1.00 xxxxxx xxxx xxxx xxxxxx xxxx xxxx 1.00
Area Adj: xxxx 1.00 1.00 1.00 1.00 xxxxxx xxxx xxxx xxxxxx 1.00 xxxx 1.00
RT Adj: xxxx xxxxx 0.85 xxxxx xxxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 0.85
LT Adj: xxxx xxxxx xxxxxx 0.95 xxxxx xxxxxx xxxx xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 0.95 1.00 1.00 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >

DelAdjPctr: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table with 13 columns: Street Name, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Cycle, Loss Time, Optimal Cycle, etc.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #21 Eight Mile Rd & Tra Vigne Rd C

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

```

*****
Intersection #22 West Lane & W Project Driveway
*****
Average Delay (sec/veh):      0.0      Worst Case Level Of Service: A[ 0.0]
*****
Street Name:      West Lane      West Project Driveway
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 0 2 0 1      0 0 2 0 0      0 0 0 0 0      0 0 0 0 1
-----|-----|-----|-----|
Volume Module:AM Peak Hour
Base Vol:      0 499      0      0 677      0      0 0 0 0 0 0 0 0
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:  0 499      0      0 677      0      0 0 0 0 0 0 0
Added Vol:    0 0 142      0 0 0 0 0 0 0 0 0 0 0
PasserByVol:  0 0 0      0 0 0 0 0 0 0 0 0 0
Initial Fut:  0 499 142      0 677 0 0 0 0 0 0 0 0
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:  0 542 154      0 736 0 0 0 0 0 0 0 0
Reduct Vol:  0 0 0      0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 542 154      0 736 0 0 0 0 0 0 0 0
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 3.3
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol:  xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 271
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 727
Move Cap.:   xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 727
Volume/Cap:  xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:   xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * * * * * * * * * * * * * * * * * *
Movement:    LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS:  * * * * * * * * * * * * * * * * * * * * * *
ApproachDel: xxxxxx      xxxxxx      xxxxxx      xxxxxx
ApproachLOS: * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****

```

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

```

*****
Intersection #22 West Lane & W Project Driveway
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HevVeh:      2%      2%      2%      2%
Grade:        0%      0%      0%      0%
Peds/Hour:    0      0      0      0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:    12 feet      12 feet      12 feet      12 feet
Time Period:  0.25 hour

```

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [18.7]

Street Name: South Project Driveway Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:AM Peak Hour

Base Vol: 0 0 0 0 0 0 0 941 0 0 894 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 0 0 0 941 0 0 894 0
Added Vol: 0 0 0 0 0 0 54 0 5 0 0 0 38
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 54 0 946 0 0 894 38
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 0 0 0 59 0 1028 0 0 972 41
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 59 0 1028 0 0 972 41

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 239 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 322 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 322 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.18 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 16.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx 18.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * *
ApproachDel: xxxxxxx 18.7 xxxxxxx xxxxxxx
ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #23 Eight Mile & S Proj Driveway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113 #108
Dist(miles): 0.250 0.100 (0.100)
Speed (mph): 1.00 25.00 (25.00)
SignalIndex: #21 #10
Cycle Time: 100 secs 100 secs
InitVolume: 0 899 81 826
Saturation: 0 3538 1769 3509
ArrivalType: 0 4 4 4
G/C: 0.00 0.57 0.13 0.62

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 0.763 0.169 0.830
gq1: 0.00 6.03 3.80 3.99
gq2: 0.00 3.09 0.25 1.83
gq: 0.00 9.12 4.05 5.82

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550 0.550
beta: 0.645 0.645
ta (secs): 900.000 28.800
F: 0.003 0.089
f: 1.000 1.000 1.000 1.000
vcmax: 0 99 557 1471
vcg: 0 253 308 1103
vcmin: 1000 1000 1000 1000
tp: 0.0 0.0 0.0 59.7
p: 0.000 0.597

*** Computation 3: Platoon Event Periods

pdom/psub: 0.597/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:2050 2041 1028 2021 2021 992 0 xxxxx xxxxx 0 xxxxx xxxxx
AdjCnflVol: 1154 1145 1028 1124 1124 96 -896 xxxxx xxxxx 0 xxxxx xxxxx
UpstreamAdj:0.40 0.403 1.000 0.40 0.403 0.403 0.40 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol:2866 2845 1028 2793 2793 239 0 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 11 17 284 21 19 800 1623 xxxxx xxxxx 1623 xxxxx xxxxx
UpstreamAdj:0.40 0.403 1.000 0.40 0.403 0.403 0.40 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 4 7 284 8 7 322 653 xxxxx xxxxx 1623 xxxxx xxxxx

 Existing Plus Approved Projects Plus Proposed Project AM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	509	128	225	37	479	479	221	884	884	397	476	5
#4 [HCM2k95thQ]:	116	451	513	197	771	133	172	942	20	755	381	51
#5 [HCM2k95thQ]:	30	402	402	341	289	289	362	362	362	392	392	392
#6 [HCM2k95thQ]:	73	73	73	111	111	111	23	84	0	55	57	57
#7 [HCM2k95thQ]:	936	185	111	83	569	481	522	479	1078	483	615	31
#8 [HCM2k95thQ]:	115	428	312	300	405	35	122	54	121	192	25	368
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	56.1	56.1	56.1	1.5	1.5	xxxx	xxxx	xxxx	xxxx
#10 [HCM2k95thQ]:	141	167	167	80	44	44	113	151	151	84	203	203
#11 [HCM2k95thQ]:	96	10	10	11	9	94	131	66	9	9	176	2
#20 [HCM2k95thQ]:	0	331	41	112	397	0	0	0	0	395	0	15
#21 [HCM2k95thQ]:	115	0	211	0	0	0	0	302	17	172	63	0
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#23 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	16.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#24 [2Way95thQ]:	2.4	2.4	xxxx	xxxx	xxxx	xxxx	2.8	2.8	2.8	xxxx	xxxx	xxxx

 Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Scenario Report

Scenario: EPAP + Proj PM
 Command: EPAP + Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.31	0.66	11	24	35	9.3
1	Gill Med Ctr	60.00	MedOffBldg	KSF 0.97	2.49	58	149	207	54.9
1	Gill Med Ctr	140.00	Hospital	KSF 0.31	0.66	43	92	135	35.8
Zone 1 Subtotal						112	265	377	100.0
TOTAL						112	265	377	100.0

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Trip Distribution Report

Percent Of Trips EPAP

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	0.2	17.8	5.0	4.7

Zone	To Gates										
	12	13	14	15	17	18	19	20	21	22	23
1	4.5	3.0	15.1	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4

Zone	To Gates	
	24	25
1	0.3	2.2

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3	Eight Mile Rd & Davis Rd	C	30.5 0.847	C	32.1 0.871	+ 1.611 D/V
# 4	Eight Mile & Lower Sacramento	D	42.4 0.964	D	47.4 1.004	+ 4.994 D/V
# 5	West Lane & Armstrong Road	C	33.1 0.731	C	33.2 0.737	+ 0.115 D/V
# 6	West Lane & Ham Lane	A	5.1 0.271	A	6.4 0.285	+ 1.288 D/V
# 7	West Lane & Eight Mile Road	E	70.1 1.064	F	82.0 1.130	+11.873 D/V
# 8	West Lane & Morada Lane	C	27.2 0.663	C	27.2 0.674	+ 0.064 D/V
# 9	Eight Mile Road & Ham Lane	D	33.3 0.163	F	395.0 1.525	+361.664 D/V
# 10	Eight Mile Road & Leach Road	B	15.0 0.506	B	14.8 0.517	-0.158 D/V
# 11	Eight Mile & MickeGrove/Holman	B	11.5 0.492	B	11.9 0.510	+ 0.412 D/V
# 20	West Lane & Tra Vigne Road B	B	11.2 0.567	B	11.1 0.574	-0.091 D/V
# 21	Eight Mile Rd & Tra Vigne Rd C	B	13.3 0.530	B	13.3 0.541	-0.005 D/V
# 22	West Lane & W Project Driveway	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 23	Eight Mile & S Proj Driveway	A	0.0 0.000	F	242.2 1.306	+242.214 D/V
# 24	Ham Ln & E Project Driveway	A	0.0 0.000	A	9.0 0.090	+ 8.994 D/V

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Signal Warrant Summary Report		
Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 9 Eight Mile Road & Ham Lane	?? / ??	Yes / Yes
# 22 West Lane & W Project Driveway	?? / ??	No / No
# 23 Eight Mile & S Proj Driveway	?? / ??	Yes / Yes
# 24 Ham Ln & E Project Driveway	?? / ??	No / No

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	97 0 18	9 1107 0	0 1107 49
ApproachDel:	xxxxxx	395.0	xxxxxx	xxxxxx

-----|-----|-----|-----|-----|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=12.6]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=115]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2387]
SUCCEED - Total volume greater than or equal to 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 1 0 0	0 0 1 1 0
Initial Vol:	0 0 0 0	97 0 18	9 1107 0	0 1107 49
Major Street Volume:	2272			
Minor Approach Volume:	115			
Minor Approach Volume Threshold:	2 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 671 67	0 567 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 671 67	0 567 0	0 0 0 0	0 0 0 0
Major Street Volume:	1305			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	193			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 165	0 1025 0	0 1141 18
ApproachDel:	xxxxxx	242.2	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=11.1]

SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=165]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=2349]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 0 165	0 1025 0	0 1141 18
Major Street Volume:	2184			
Minor Approach Volume:	165			
Minor Approach Volume Threshold:	11 [less than minimum of 100]			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	21 37 0	0 29 6	14 0 86	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	9.0	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=100]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=193]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various signal and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with signal and control data.

Volume Module: PM Peak Hour

Table with 10 columns: Metric, Value. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 10 columns: Metric, Value. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 10 columns: Metric, Value. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 0 1 0 1 1 0 1 0 2 0 1
Lane Group: L T R L RT RT L RT RT L T R
#LnsInGrps: 1 1 1 1 1 1 1 1 2 2 1 2 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < Other > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0 0 0 0 0 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx 0.92 0.92 xxxx 0.97 0.97 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.90 0.90 0.93 0.95 0.95 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.90 0.90 0.93 0.90 0.90 0.93 0.93 0.83
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.13 0.26 0.26 0.02 0.15 0.15 0.08 0.51 0.51 0.09 0.52 0.52
ArrivalType: 4 4 4 4 4 4 4 4 4 4 4 4
ProgFactor: 0.99 0.90 0.91 1.00 0.99 0.99 0.99 0.89 0.89 1.00 0.79 0.65
Q1: 5.2 1.8 2.4 0.2 6.2 6.2 2.8 17.6 17.6 3.7 11.2 0.0
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 3.4 0.2 0.4 0.4 3.6 3.6 1.8 5.1 5.1 3.0 2.2 0.0
HCM2KQueue: 8.7 2.0 2.8 0.6 9.8 9.8 4.5 22.6 22.6 6.7 13.4 0.0
70th%Factor: 1.18 1.20 1.19 1.20 1.18 1.18 1.19 1.16 1.16 1.18 1.17 1.20
HCM2k70thQ: 10.2 2.4 3.3 0.7 11.6 11.6 5.4 26.2 26.2 7.9 15.7 0.1
85th%Factor: 1.52 1.58 1.57 1.59 1.52 1.52 1.56 1.44 1.44 1.54 1.49 1.60
HCM2k85thQ: 13.2 3.2 4.4 0.9 14.9 14.9 7.0 32.6 32.6 10.3 19.9 0.1
90th%Factor: 1.66 1.76 1.75 1.79 1.64 1.64 1.72 1.53 1.53 1.69 1.60 1.80
HCM2k90thQ: 14.4 3.6 4.9 1.1 16.2 16.2 7.8 34.6 34.6 11.3 21.5 0.1
95th%Factor: 1.87 2.04 2.01 2.08 1.85 1.85 1.97 1.67 1.67 1.91 1.79 2.10
HCM2k95thQ: 16.2 4.1 5.6 1.2 18.2 18.2 8.9 37.8 37.8 12.8 23.9 0.1
98th%Factor: 2.21 2.56 2.51 2.66 2.17 2.17 2.41 1.88 1.88 2.30 2.06 2.70
HCM2k98thQ: 19.2 5.2 7.0 1.6 21.3 21.3 10.9 42.4 42.4 15.4 27.5 0.1

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap. (X): 1.004
Loss Time (sec): 12 Average Delay (sec/veh): 47.4
Optimal Cycle: 180 Level Of Service: D

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 0 1 1 0 1 0 1 1 0 2 0 1

Volume Module: PM Peak Hour

Base Vol: 49 372 406 78 334 112 98 1084 22 434 1184 57
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 49 372 406 78 334 112 98 1084 22 434 1184 57
Added Vol: 0 0 19 2 0 0 0 23 0 45 54 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 49 372 425 80 334 112 98 1107 22 479 1238 63
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 53 404 462 87 363 122 107 1203 24 521 1346 68
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 404 462 87 363 122 107 1203 24 521 1346 68
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 53 404 462 87 363 122 107 1203 24 521 1346 68

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 3538 1862 1583 1769 1862 1583 1769 3724 1583 1769 3724 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.22 0.29 0.05 0.19 0.08 0.06 0.32 0.02 0.29 0.36 0.04
Crit Moves: **** **** ****
Green/Cycle: 0.02 0.22 0.51 0.05 0.25 0.25 0.09 0.32 0.32 0.29 0.53 0.53
Volume/Cap: 0.79 1.00 0.57 1.00 0.79 0.31 0.69 1.00 0.05 1.00 0.69 0.08
Delay/Veh: 94.6 85.1 18.0 145.4 44.4 31.2 56.3 60.9 23.4 75.9 18.5 11.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 94.6 85.1 18.0 145.4 44.4 31.2 56.3 60.9 23.4 75.9 18.5 11.7
LOS by Move: F F B F D C E E C E B B
HCM2k95thQ: 110 791 379 278 550 150 223 1051 23 947 574 36

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 2 0 1 0 1 1 0 1 0 1 1 0 2 0 1 1 0 2 0 1
Lane Group: L T R L T R L T R L T R
#LnsInGrps: 2 1 1 1 1 1 1 2 1 1 2 1

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.737
Loss Time (sec): 12 Average Delay (sec/veh): 33.2
Optimal Cycle: 65 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	0	0	1	0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	2	2	1	2	2	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsSwalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < Other > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	4	4	4	4	4	4
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.99	0.99	0.99	0.99	0.99	0.94	0.94	0.94
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.99	0.99	0.99	0.99	0.99	0.99
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.97	0.97	0.96	0.96	0.96	0.92	0.92	0.92
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.92	0.92	0.93	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.00	0.28	0.28	0.11	0.39	0.39	0.08	0.08	0.08	0.41	0.41	0.41
ArrivalType:	4			4			4			4		
ProgFactor:	1.00	0.95	0.95	0.99	0.85	0.85	0.99	0.99	0.99	0.90	0.90	0.90
Q1:	0.1	9.1	9.1	3.8	5.5	5.5	2.7	2.7	2.7	11.2	11.2	11.2
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	2.5	2.5	2.1	0.8	0.8	2.0	2.0	2.0	2.5	2.5	2.5
HCM2KQueue:	0.5	11.6	11.6	5.9	6.2	6.2	4.7	4.7	4.7	13.7	13.7	13.7
70th%Factor:	1.20	1.17	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.17	1.17	1.17
HCM2k70thQ:	0.6	13.6	13.6	7.0	7.4	7.4	5.6	5.6	5.6	16.0	16.0	16.0
85th%Factor:	1.59	1.50	1.50	1.55	1.54	1.54	1.56	1.56	1.56	1.49	1.49	1.49
HCM2k85thQ:	0.8	17.4	17.4	9.2	9.6	9.6	7.3	7.3	7.3	20.4	20.4	20.4
90th%Factor:	1.79	1.62	1.62	1.70	1.69	1.69	1.72	1.72	1.72	1.60	1.60	1.60
HCM2k90thQ:	0.9	18.8	18.8	10.1	10.5	10.5	8.0	8.0	8.0	21.9	21.9	21.9
95th%Factor:	2.08	1.82	1.82	1.93	1.92	1.92	1.96	1.96	1.96	1.78	1.78	1.78
HCM2k95thQ:	1.1	21.0	21.0	11.4	12.0	12.0	9.2	9.2	9.2	24.4	24.4	24.4
98th%Factor:	2.66	2.11	2.11	2.33	2.32	2.32	2.40	2.40	2.40	2.05	2.05	2.05
HCM2k98thQ:	1.4	24.5	24.5	13.8	14.5	14.5	11.2	11.2	11.2	28.1	28.1	28.1

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap. (X): 0.285
Loss Time (sec): 9 Average Delay (sec/veh): 6.4
Optimal Cycle: 25 Level Of Service: A

Street Name: Ham Lane West Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 1 0 0 0 1 1 0 1 0 1 1 0

Volume Module:PM Peak Hour

Base Vol: 0 2 32 18 0 1 5 688 0 21 574 45
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 2 32 18 0 1 5 688 0 21 574 45
Added Vol: 0 2 12 0 1 0 0 0 0 5 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 4 44 18 1 1 5 688 0 26 574 45
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 4 48 20 1 1 5 748 0 28 624 49
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 4 48 20 1 1 5 748 0 28 624 49
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 4 48 20 1 1 5 748 0 28 624 49

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.86 0.86 0.75 0.75 0.75 0.93 0.93 0.95 0.93 0.92 0.92
Lanes: 0.00 0.08 0.92 0.90 0.05 0.05 1.00 2.00 0.00 1.00 1.85 0.15
Final Sat.: 0 136 1495 1283 71 71 1769 3538 0 1769 3245 254

Capacity Analysis Module:

Vol/Sat: 0.00 0.03 0.03 0.02 0.02 0.02 0.00 0.21 0.00 0.02 0.19 0.19
Crit Moves: **** ****
Green/Cycle: 0.00 0.11 0.11 0.11 0.11 0.11 0.01 0.74 0.00 0.06 0.79 0.79
Volume/Cap: 0.00 0.28 0.28 0.14 0.14 0.14 0.24 0.28 0.00 0.28 0.24 0.24
Delay/Veh: 0.0 41.6 41.6 40.4 40.4 40.4 54.6 4.3 0.0 46.9 2.9 2.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 41.6 41.6 40.4 40.4 40.4 54.6 4.3 0.0 46.9 2.9 2.9
LOS by Move: A D D D D D D A A A D A A
HCM2k95thQ: 0 86 86 35 35 35 23 30 0 58 17 17

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 0 1 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
Lane Group: xxxx RT RT LTR LTR LTR L RT RT L RT RT
#LnsInGrps: 0 1 1 1 1 1 1 2 2 1 2 2

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: xxxx xxxx xxxx 5 5 5 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: xxxx 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Bus Stp Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Area Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx 0.88 0.88 0.99 0.99 0.99 1.00 1.00 1.00 1.00 1.00
LT Adj: xxxx xxxx xxxxxx 0.77 0.77 0.77 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 0.86 0.86 0.75 0.75 0.75 0.93 0.98 1.00 0.93 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
Fnl Sat Adj: 1.00 0.86 0.86 0.75 0.75 0.75 0.93 0.93 0.95 0.93 0.92 0.92

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjPctr: 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.130
Loss Time (sec): 12 Average Delay (sec/veh): 82.0
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Volume Module: PM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module: Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExlusiveRT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type.

Table with columns for DelAdjPctr.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 West Lane & Morada Lane

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Includes a note: Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 19.1 Worst Case Level Of Service: F[395.0]

Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 1 1 0 0 0 0 1 1 0
Volume Module:PM Peak Hour
Base Vol: 0 0 0 11 0 18 6 1107 0 0 1089 31
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 11 0 18 6 1107 0 0 1089 31
Added Vol: 0 0 0 86 0 0 3 0 0 0 0 18 18
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 97 0 18 9 1107 0 0 1107 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 105 0 20 10 1203 0 0 1203 53
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 105 0 20 10 1203 0 0 1203 53
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.8 6.5 6.9 4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx 1761 2410 442 1120 xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx 70 30 522 574 xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx 69 30 522 574 xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx 1.53 0.00 0.04 0.02 xxxx xxxxx xxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 1.3 xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 11.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx 80 xxxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 10.2 xxxxx 0.1 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 395 xxxxx 11.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * F * * * * * B * * * * *
ApproachDel: xxxxxx 395.0 xxxxxx xxxxxx
ApproachLOS: * * * * * F * * * * *

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113 #108
Dist(miles): 0.250 0.100
Speed (mph): 1.00 25.00
SignalIndex: #21 #10
Cycle Time: 100 secs 100 secs
InitVolume: 0 974 75 1085
Saturation: 0 3538 1769 3518
ArrivalType: 0 4 4 4
G/C: 0.00 0.55 0.12 0.65
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
p: 0.000 0.738 0.159 0.864
gq1: 0.00 7.22 3.57 4.19
gq2: 0.00 4.18 0.21 2.93
gq: 0.00 11.40 3.78 7.12
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.400 0.400
beta: 0.714 0.714
ta (secs): 900.000 14.400
F: 0.004 0.196
f: 1.000 1.000 1.000 1.000
vcmax: 0 153 992 2771
vcg: 0 333 252 1446
vcmin: 2000 2000 2000 2000
tp: 0.0 0.0 0.0 7.3
p: 0.000 0.073
*** Computation 3: Platoon Event Periods
pdom/psub: 0.073/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:1824 2479 602 1851 2453 628 1257 xxxxx xxxxx 0 xxxxx xxxxx
AdjCnflVol: 1606 2261 602 1633 2235 410 1039 xxxxx xxxxx 0 xxxxx xxxxx
UpstreamAdj:0.93 0.927 1.000 0.93 0.927 0.927 0.93 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol:1732 2439 602 1761 2410 442 1120 xxxxx xxxxx 0 xxxxx xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 56 31 443 76 32 563 619 xxxxx xxxxx 1622 xxxxx xxxxx
UpstreamAdj:0.93 0.927 1.000 0.93 0.927 0.927 0.93 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 52 29 443 70 30 522 574 xxxxx xxxxx 1622 xxxxx xxxxx

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.517
Loss Time (sec): 12 Average Delay (sec/veh): 14.8
Optimal Cycle: 42 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for Leach Road and Eight Mile Road.

Volume Module: PM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type.

Table with columns for DelAdjFctr.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #11 Eight Mile & MickeGrove/Holman, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ, and a Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	1	0	1	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R				
#LnsInGrps:	1	1	1	1	1	1	1	2	1	1	2	1				
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12				
CrsswalkWid:	8			8			8			8						
% Hev Veh:	2			2			2			2						
Grade:	0%			0%			0%			0%						
Parking/Hr:	No			No			No			No						
Bus Stp/Hr:	0			0			0			0						
Area Type:	< < < < < < < < < < < < Other > > > > > > > > > > > > >															
Cnft Ped/Hr:	0			0			0			0						
ExclusiveRT:	Include			Include			Include			Include						
% RT Prtct:	0			0			0			0						
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx				
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98				
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00				
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00				
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85				
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx				
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83				
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00				
Fnl Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.93	0.83	0.93	0.93	0.83				
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.08	0.04	0.04	0.13	0.09	0.09	0.07	0.70	0.70	0.01	0.64	0.64
ArrivalType:	4			4			4			4		
ProgFactor:	0.99	0.99	0.99	0.95	0.97	0.98	0.99	0.24	0.21	1.00	0.50	0.42
Q1:	1.8	0.1	0.1	0.5	0.1	1.9	1.8	1.6	0.2	0.2	4.5	0.1
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.03	0.45	0.41
Q2:	0.9	0.1	0.1	0.1	0.0	0.9	0.9	0.7	0.1	0.0	0.5	0.0
HCM2KQueue:	2.8	0.2	0.2	0.6	0.2	2.9	2.7	2.4	0.3	0.2	4.9	0.1
70th%Factor:	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.20	1.20	1.19	1.20
HCM2k70thQ:	3.3	0.3	0.3	0.7	0.2	3.4	3.2	2.8	0.4	0.2	5.9	0.1
85th%Factor:	1.57	1.60	1.60	1.59	1.60	1.57	1.57	1.58	1.60	1.60	1.55	1.60
HCM2k85thQ:	4.4	0.4	0.4	0.9	0.3	4.5	4.3	3.7	0.5	0.3	7.7	0.1
90th%Factor:	1.75	1.80	1.80	1.79	1.80	1.75	1.75	1.76	1.79	1.80	1.71	1.80
HCM2k90thQ:	4.8	0.4	0.4	1.0	0.3	5.0	4.7	4.1	0.5	0.3	8.5	0.1
95th%Factor:	2.01	2.09	2.09	2.08	2.09	2.01	2.02	2.03	2.09	2.09	1.96	2.10
HCM2k95thQ:	5.6	0.5	0.5	1.1	0.3	5.8	5.5	4.8	0.6	0.4	9.7	0.1
98th%Factor:	2.51	2.68	2.68	2.66	2.69	2.50	2.51	2.53	2.68	2.69	2.38	2.70
HCM2k98thQ:	6.9	0.6	0.6	1.5	0.4	7.2	6.8	6.0	0.8	0.5	11.8	0.2

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 West Lane & Tra Vigne Road B

Cycle (sec): 100 Critical Vol./Cap.(X): 0.574
Loss Time (sec): 9 Average Delay (sec/veh): 11.1
Optimal Cycle: 39 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Volume Module: PM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Future Volume Alternative

Intersection #20 West Lane & Tra Vigne Road B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Frl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type, DelAdjFctr.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table with 13 columns: Street Name, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Cycle, Loss Time, Optimal Cycle, etc.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 West Lane & W Project Driveway

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module:PM Peak Hour.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table for Critical Gap Module with columns for Critical Gp and FollowUpTim.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #22 West Lane & W Project Driveway

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound, HevVeh, Grade, Peds/Hour, Pedestrian Walk Speed, LaneWidth, Time Period.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway

Average Delay (sec/veh): 17.0 Worst Case Level Of Service: F[242.2]

Street Name: South Project Driveway Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:PM Peak Hour

Table with 13 columns for volume and adjustment factors (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume).

Critical Gap Module:

Table for Critical Gap Module with columns for Critical Gp and FollowUpTim.

Capacity Module:

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #23 Eight Mile & S Proj Driveway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Table for Upstream Signals with columns for Link Index, Dist(miles), Speed (mph), SignalIndex, Cycle Time, InitVolume, Saturation, and ArrivalType.

G/C: 0.00 0.55 0.12 0.65

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 0.738 0.159 0.864

gq1: 0.00 7.22 3.57 4.19

gq2: 0.00 4.18 0.21 2.93

gq: 0.00 11.40 3.78 7.12

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550 0.550

beta: 0.645 0.645

ta (secs): 900.000 28.800

F: 0.003 0.089

f: 1.000 1.000 1.000 1.000

vcmax: 0 124 526 1708

vcg: 0 275 299 1448

vcmin: 1000 1000 1000 1000

tp: 0.0 0.0 0.0 65.2

p: 0.000 0.652

*** Computation 3: Platoon Event Periods

pdom/psub0: 0.652/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:2454 2374 1114 2364 2364 1250 0 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1476 1396 1114 1386 1386 272 -978 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:0.35 0.348 1.000 0.35 0.348 0.348 0.35 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:4241 4011 1114 3983 3983 782 0 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 1 3 253 3 3 394 1623 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:0.35 0.348 1.000 0.35 0.348 0.348 0.35 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 0 1 253 1 1 137 565 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #24 Ham Ln & E Project Driveway

 Average Delay (sec/veh): 5.5 Worst Case Level Of Service: A[9.0]

 Street Name: Ham Lane East Project Driveway
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
 Rights: Include Include Include Include
 Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0
 Volume Module: PM Peak Hour
 Base Vol: 0 37 0 0 29 0 0 0 0 0 0 0 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 37 0 0 29 0 0 0 0 0 0 0 0
 Added Vol: 21 0 0 0 0 6 14 0 86 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 21 37 0 0 29 6 14 0 86 0 0 0 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 23 40 0 0 32 7 15 0 93 0 0 0 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 23 40 0 0 32 7 15 0 93 0 0 0 0
 Critical Gap Module:
 Critical Gp: 4.1 xxx xxx xxx xxx xxx 6.4 6.5 6.2 xxx xxx xxx
 FollowUpTim: 2.2 xxx xxx xxx xxx xxx 3.5 4.0 3.3 xxx xxx xxx
 Capacity Module:
 Cnflct Vol: 38 xxx xxx xxx xxx xxx 121 121 35 xxx xxx xxx
 Potent Cap.: 1572 xxx xxx xxx xxx xxx 875 770 1038 xxx xxx xxx
 Move Cap.: 1572 xxx xxx xxx xxx xxx 865 758 1038 xxx xxx xxx
 Volume/Cap: 0.01 xxx xxx xxx xxx xxx 0.02 0.00 0.09 xxx xxx xxx
 Level Of Service Module:
 2Way95thQ: 1.1 xxx xxx xxx xxx xxx xxx xxx xxx xxx
 Control Del: 7.3 xxx xxx xxx xxx xxx xxx xxx xxx xxx
 LOS by Move: A *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxx xxx xxx xxx xxx xxx xxx 1010 xxx xxx xxx
 SharedQueue: 0.0 xxx xxx xxx xxx xxx xxx xxx 0.4 xxx xxx xxx xxx
 Shrd ConDel: 7.3 xxx xxx xxx xxx xxx xxx xxx 9.0 xxx xxx xxx xxx
 Shared LOS: A *
 ApproachDel: xxx xxx xxx xxx xxx 9.0 xxx xxx
 ApproachLOS: * * * * * A * * * * *

 Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

 Intersection #24 Ham Ln & E Project Driveway

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 HevVeh: 2% 2% 2% 2%
 Grade: 0% 0% 0% 0%
 Peds/Hour: 0 0 0 0
 Pedestrian Walk Speed: 4.00 feet/sec
 LaneWidth: 12 feet 12 feet 12 feet 12 feet
 Time Period: 0.25 hour
 Upstream Signals:
 Link Index: #96
 Dist(miles): 0.250
 Speed (mph): 1.00
 SignalIndex: #6
 Cycle Time: 100 secs
 InitVolume: 26 1
 Saturation: 1769 71
 ArrivalType: 4 4
 G/C: 0.06 0.11
 *** Computation 1: Time for Queue to Clear at Each Upstream Intersection
 P: 0.075 0.150
 gq1: 1.36 1.19
 gq2: 0.03 0.02
 gq: 1.39 1.22
 *** Computation 2: Time Intersection Blocked Because of Upstream Platoons
 alpha: 0.550
 beta: 0.645
 ta (secs): 900.000
 F: 0.003
 f: 1.000 1.000
 vcmax: 8 0
 vcg: 8 0
 vcmin: 1000 1000
 tp: 0.0 0.0
 p: 0.000
 *** Computation 3: Platoon Event Periods
 pdom/psubo: 0.000/0.000/Unconstrained
 *** Computation 4: Conflicting Flows During Each Unblocked Period
 InitCnflVol: 38 xxx xxx 0 xxx xxx 121 121 35 167 124 40
 AdjCnflVol: 38 xxx xxx 0 xxx xxx 121 121 35 167 124 40
 UpstreamAdj: 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
 ConflictVol: 38 xxx xxx 0 xxx xxx 121 121 35 167 124 40
 *** Computation 5: Capacity for Subject Movement During Unblocked Period
 InitPotCap: 1572 xxx xxx 1623 xxx xxx 875 770 1038 797 767 1031
 UpstreamAdj: 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
 Potent Cap.: 1572 xxx xxx 1623 xxx xxx 875 770 1038 797 767 1031

 Existing Plus Approved Projects Plus Proposed Project PM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	406	103	141	31	454	454	222	945	945	320	597	2
#4 [HCM2k95thQ]:	110	791	379	278	550	150	223	1051	23	947	574	36
#5 [HCM2k95thQ]:	27	526	526	286	300	300	230	230	230	610	610	610
#6 [HCM2k95thQ]:	0	86	86	35	35	35	23	30	0	58	17	17
#7 [HCM2k95thQ]:	1269	213	128	79	338	592	797	621	1036	560	1206	18
#8 [HCM2k95thQ]:	104	559	232	249	310	23	109	37	122	245	24	403
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	255	255	255	1.3	1.3	xxxx	xxxx	xxxx	xxxx
#10 [HCM2k95thQ]:	133	169	169	70	42	42	127	253	253	173	259	259
#11 [HCM2k95thQ]:	139	12	12	29	9	144	137	119	16	9	242	3
#20 [HCM2k95thQ]:	0	270	34	137	94	0	0	0	0	289	0	8
#21 [HCM2k95thQ]:	174	0	189	0	0	0	0	373	23	267	36	0
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#23 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	281	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#24 [2Way95thQ]:	1.1	1.1	xxxx	xxxx	xxxx	xxxx	9.0	9.0	9.0	xxxx	xxxx	xxxx

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Scenario Report

Scenario: EPAP + Proj AM
 Command: EPAP + Proj AM
 Volume: EPAP AM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF	0.61	0.28	22	10	32 9.9
1	Gill Med Ctr	60.00	MedOffBldg	KSF	2.17	0.61	130	37	167 51.7
1	Gill Med Ctr	140.00	Hospital	KSF	0.61	0.28	85	39	124 38.4
Zone 1 Subtotal							237	86	323 100.0
TOTAL							237	86	323 100.0

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Trip Distribution Report

Percent Of Trips EPAP

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	0.2	17.8	5.0	4.7

Zone	To Gates										
	12	13	14	15	17	18	19	20	21	22	23
1	4.5	3.0	15.1	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4

Zone	To Gates	
	24	25
1	0.3	2.2

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 7 West Lane & Eight Mile Road	D	37.1	0.853	D	38.8 0.864	+ 1.696 D/V
# 9 Eight Mile Road & Ham Lane	A	1.6	0.395	A	2.8 0.418	+ 1.227 D/V

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Intersection	Signal Warrant Summary Report			
	Base Met		Future Met	
	[Del / Vol]		[Del / Vol]	

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.864
Loss Time (sec): 12 Average Delay (sec/veh): 38.8
Optimal Cycle: 95 Level Of Service: D

Street Name: West Lane Eight Mile Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	0	2	0	1	1	0

Volume Module: AM Peak Hour

Base Vol:	456	284	99	43	449	185	194	799	554	161	712	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	456	284	99	43	449	185	194	799	554	161	712	21
Added Vol:	0	43	0	0	0	0	94	0	0	16	34	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	456	327	99	43	449	185	288	799	554	177	746	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	496	355	108	47	488	201	313	868	602	192	811	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	496	355	108	47	488	201	313	868	602	192	811	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	496	355	108	47	488	201	313	868	602	192	811	28

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3538	3724	1583	1769	3724	1583	1769	3724	1583	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.14	0.10	0.07	0.03	0.13	0.13	0.18	0.23	0.38	0.11	0.22	0.02
Crit Moves:	****			****			****		****	****		
Green/Cycle:	0.16	0.25	0.25	0.07	0.15	0.15	0.25	0.44	0.44	0.13	0.31	0.31
Volume/Cap:	0.86	0.39	0.28	0.39	0.86	0.84	0.70	0.53	0.86	0.86	0.70	0.06
Delay/Veh:	53.7	31.7	30.9	46.7	54.5	63.2	38.6	20.8	36.2	70.6	32.1	24.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.7	31.7	30.9	46.7	54.5	63.2	38.6	20.8	36.2	70.6	32.1	24.1
LOS by Move:	D	C	C	D	D	E	D	C	D	E	C	C
HCM2k95thQ:	472	218	131	93	468	398	444	391	797	401	517	28

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report (HCM2000 Queue Method) 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	100	xxxxxx
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	84.65	xxxxxx
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	85.65	xxxxxx
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	85.65	xxxxxx
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	2	xxxxxx
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	2	xxxxxx
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	14	xxxxxx
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.01	xxxxxx
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.39	xxxxxx
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	999	xxxxxx
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	14.61	xxxxxx
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.33	xxxxxx
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	xxxxxx
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	50.92	xxxxxx
Opposing Queue Ratio, gro:	xxxxxx	xxxxxx	0.00	xxxxxx
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	0.00	xxxxxx
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	34.73	xxxxxx
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	0.25	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	0.03	xxxxxx
Through-car Equivalent, ell:	xxxxxx	xxxxxx	3.91	xxxxxx
Single Lane Through-car Equivalent, el2:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.02	xxxxxx
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.97	xxxxxx
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.94	xxxxxx

Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.00	0.00	0.00	0.08	0.00	0.08	0.86	0.86	0.00	0.00	0.86	0.86
ArrivalType:	4			4			4			4		
ProgFactor:	1.00	1.00	1.00	0.98	1.00	0.98	0.00	0.00	1.00	1.00	0.00	0.00
Q1:	0.0	0.0	0.0	1.6	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.48	0.00	0.00	0.41	0.41
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.87	0.00	0.00	0.92	0.92
EarlyArrAdj:	0.00	0.00	0.00	1.00	0.00	1.00	0.82	0.82	0.00	0.00	0.88	0.88
Q2:	0.0	0.0	0.0	0.7	0.0	0.7	0.6	0.6	0.0	0.0	0.4	0.4
HCM2KQueue:	0.0	0.0	0.0	2.3	0.0	2.3	0.6	0.6	0.0	0.0	0.4	0.4
70th%Factor:	1.20	1.20	1.20	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.20	1.20
HCM2k70thQ:	0.0	0.0	0.0	2.7	0.0	2.7	0.7	0.7	0.0	0.0	0.5	0.5
85th%Factor:	1.60	1.60	1.60	1.58	1.60	1.58	1.59	1.59	1.60	1.60	1.60	1.60
HCM2k85thQ:	0.0	0.0	0.0	3.6	0.0	3.6	0.9	0.9	0.0	0.0	0.7	0.7
90th%Factor:	1.80	1.80	1.80	1.76	1.80	1.76	1.79	1.79	1.80	1.80	1.79	1.79
HCM2k90thQ:	0.0	0.0	0.0	4.0	0.0	4.0	1.0	1.0	0.0	0.0	0.8	0.8
95th%Factor:	2.10	2.10	2.10	2.03	2.10	2.03	2.08	2.08	2.10	2.10	2.09	2.09
HCM2k95thQ:	0.0	0.0	0.0	4.6	0.0	4.6	1.2	1.2	0.0	0.0	0.9	0.9
98th%Factor:	2.70	2.70	2.70	2.54	2.70	2.54	2.66	2.66	2.70	2.70	2.67	2.67
HCM2k98thQ:	0.0	0.0	0.0	5.7	0.0	5.7	1.5	1.5	0.0	0.0	1.2	1.2

 Existing Plus Approved Projects Plus Proposed Project AM Peak Hour
 With Recommended Improvements

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#7 [HCM2k95thQ]:	472	218	131	93	468	398	444	391	797	401	517	28
#9 [HCM2k95thQ]:	0	0	0	114	0	114	30	30	0	0	23	23

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Scenario Report

Scenario: EPAP + Proj PM
 Command: EPAP + Proj PM
 Volume: EPAP PM Pk Hr
 Geometry: EPAP
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: EPAP
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF	0.31	0.66	11	24	35 9.3
1	Gill Med Ctr	60.00	MedOffBldg	KSF	0.97	2.49	58	149	207 54.9
1	Gill Med Ctr	140.00	Hospital	KSF	0.31	0.66	43	92	135 35.8
Zone 1 Subtotal							112	265	377 100.0
TOTAL							112	265	377 100.0

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Trip Distribution Report

Percent Of Trips EPAP

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	0.2	17.8	5.0	4.7

Zone	To Gates										
	12	13	14	15	17	18	19	20	21	22	23
1	4.5	3.0	15.1	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4

Zone	To Gates	
	24	25
1	0.3	2.2

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ C	Del/ LOS	V/ C	
# 7 West Lane & Eight Mile Road	D	39.8	0.864	D	44.6 0.930	+ 4.875 D/V
# 9 Eight Mile Road & Ham Lane	A	1.6	0.403	A	5.5 0.463	+ 3.861 D/V

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Intersection Signal Warrant Summary Report
Base Met Future Met
[Del / Vol] [Del / Vol]

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.930
Loss Time (sec): 12 Average Delay (sec/veh): 44.6
Optimal Cycle: 125 Level Of Service: D

Street Name: West Lane Eight Mile Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	0	2	0	1	1	0

Volume Module: PM Peak Hour

Base Vol:	573	394	127	38	325	204	264	857	496	161	967	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	573	394	127	38	325	204	264	857	496	161	967	13
Added Vol:	0	20	0	0	0	0	44	0	0	48	105	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	573	414	127	38	325	204	308	857	496	209	1072	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	623	450	138	41	353	222	335	932	539	227	1165	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	623	450	138	41	353	222	335	932	539	227	1165	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	623	450	138	41	353	222	335	932	539	227	1165	17

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3538	3724	1583	1769	3724	1583	1769	3724	1583	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.18	0.12	0.09	0.02	0.09	0.14	0.19	0.25	0.34	0.13	0.31	0.01
Crit Moves:	****					****	****			****		
Green/Cycle:	0.19	0.28	0.28	0.06	0.15	0.15	0.20	0.39	0.39	0.15	0.34	0.34
Volume/Cap:	0.93	0.42	0.31	0.42	0.63	0.93	0.93	0.64	0.87	0.87	0.93	0.03
Delay/Veh:	59.4	29.4	28.4	48.7	42.1	81.4	69.2	25.6	40.5	66.9	44.2	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.4	29.4	28.4	48.7	42.1	81.4	69.2	25.6	40.5	66.9	44.2	22.3
LOS by Move:	E	C	C	D	D	F	E	C	D	E	D	C
HCM2k95thQ:	598	260	157	90	290	477	627	500	761	449	905	16

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report (HCM2000 Queue Method) 2000 HCM Operations Method Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

***** Intersection #9 Eight Mile Road & Ham Lane *****

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 6 Average Delay (sec/veh): 5.5
Optimal Cycle: 26 Level Of Service: A

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 1 1 0 0 0 0 1 1 0

Volume Module: PM Peak Hour

Base Vol: 0 0 0 11 0 18 6 1107 0 0 1089 31
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 11 0 18 6 1107 0 0 1089 31
Added Vol: 0 0 0 86 0 0 3 0 0 0 0 18 18
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 97 0 18 9 1107 0 0 1107 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 105 0 20 10 1203 0 0 1203 53
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 105 0 20 10 1203 0 0 1203 53
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 105 0 20 10 1203 0 0 1203 53

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.92 1.00 0.92 0.88 0.88 1.00 1.00 0.93 0.93
Lanes: 0.00 0.00 0.00 0.84 0.00 0.16 0.02 1.98 0.00 0.00 1.92 0.08
Final Sat.: 0 0 0 1476 0 274 27 3306 0 0 3368 149

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.07 0.00 0.07 0.36 0.36 0.00 0.00 0.36 0.36
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.15 0.00 0.15 0.79 0.79 0.00 0.00 0.79 0.79
Volume/Cap: 0.00 0.00 0.00 0.46 0.00 0.46 0.46 0.46 0.00 0.00 0.45 0.45
Delay/Veh: 0.0 0.0 0.0 39.8 0.0 39.8 3.7 3.7 0.0 0.0 3.7 3.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 39.8 0.0 39.8 3.7 3.7 0.0 0.0 3.7 3.7
LOS by Move: A A A D A D A A A A A A
HCM2k95thQ: 0 0 0 192 0 192 33 33 0 0 33 33

Note: Queue reported is the distance per lane in feet.

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour With Recommended Improvements

Level of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

***** Intersection #9 Eight Mile Road & Ham Lane *****

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:

Lanes: 0 0 0 0 0 0 0 1 0 0 0 1 1 0 0 0 0 1 1 0
Lane Group: xxxx xxxx xxxx LTR LTR LTR LT LT xxxx xxxx RT RT
#LnsInGrps: 0 0 0 1 1 1 2 2 0 0 2 2

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0

Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0

ExclusiveRT: Include Include Include Include

% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: xxxx xxxx xxxx 4 xxxx 4 5 5 xxxx xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: xxxx xxxx xxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxx xxxx 1.00 1.00
Hev Veh Adj: xxxx xxxx xxxxx 0.98 xxxx 0.98 0.98 0.98 xxxxx xxxx 0.98 0.98
Grade Adj: xxxx xxxx xxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxx xxxx 1.00 1.00
Parking Adj: xxxx xxxx xxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxx xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx xxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxx xxxx 1.00 1.00
Area Adj: xxxx xxxx xxxxx 1.00 xxxx 1.00 1.00 1.00 xxxxx xxxx 1.00 1.00
RT Adj: xxxx xxxx xxxxx 0.98 xxxx 0.98 xxxx xxxx xxxxx xxxx 0.99 0.99
LT Adj: xxxx xxxx xxxxx 0.96 xxxx 0.96 0.94 0.94 xxxxx xxxx xxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 1.00 1.00 0.92 1.00 0.92 0.92 0.92 1.00 1.00 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 1.00 0.95 0.95
Fnl Sat Adj: 1.00 1.00 1.00 0.92 1.00 0.92 0.88 0.88 1.00 1.00 0.93 0.93

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > > >

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >

DelAdjFctr: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	100	xxxxxx
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	77.57	xxxxxx
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	78.57	xxxxxx
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	78.57	xxxxxx
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	2	xxxxxx
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	2	xxxxxx
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	10	xxxxxx
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.01	xxxxxx
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.27	xxxxxx
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	1257	xxxxxx
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	18.38	xxxxxx
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.33	xxxxxx
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	xxxxxx
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	51.85	xxxxxx
Opposing Queue Ratio, gro:	xxxxxx	xxxxxx	0.00	xxxxxx
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	0.00	xxxxxx
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	26.72	xxxxxx
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	0.09	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	0.02	xxxxxx
Through-car Equivalent, ell:	xxxxxx	xxxxxx	5.07	xxxxxx
Single Lane Through-car Equivalent, el2:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.03	xxxxxx
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.97	xxxxxx
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.94	xxxxxx

Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.00	0.00	0.00	0.15	0.00	0.15	0.79	0.79	0.00	0.00	0.79	0.79
ArrivalType:	4			4			4			4		
ProgFactor:	1.00	1.00	1.00	0.96	1.00	0.96	0.00	0.00	1.00	1.00	0.00	0.00
Q1:	0.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.00	0.00	0.52	0.52
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.82	0.00	0.00	0.84	0.84
EarlyArrAdj:	0.00	0.00	0.00	1.00	0.00	1.00	0.73	0.73	0.00	0.00	0.78	0.78
Q2:	0.0	0.0	0.0	0.8	0.0	0.8	0.6	0.6	0.0	0.0	0.6	0.6
HCM2KQueue:	0.0	0.0	0.0	3.9	0.0	3.9	0.6	0.6	0.0	0.0	0.6	0.6
70th%Factor:	1.20	1.20	1.20	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.20	1.20
HCM2k70thQ:	0.0	0.0	0.0	4.6	0.0	4.6	0.8	0.8	0.0	0.0	0.8	0.8
85th%Factor:	1.60	1.60	1.60	1.56	1.60	1.56	1.59	1.59	1.60	1.60	1.59	1.59
HCM2k85thQ:	0.0	0.0	0.0	6.1	0.0	6.1	1.0	1.0	0.0	0.0	1.0	1.0
90th%Factor:	1.80	1.80	1.80	1.73	1.80	1.73	1.79	1.79	1.80	1.80	1.79	1.79
HCM2k90thQ:	0.0	0.0	0.0	6.7	0.0	6.7	1.1	1.1	0.0	0.0	1.2	1.2
95th%Factor:	2.10	2.10	2.10	1.98	2.10	1.98	2.08	2.08	2.10	2.10	2.08	2.08
HCM2k95thQ:	0.0	0.0	0.0	7.7	0.0	7.7	1.3	1.3	0.0	0.0	1.3	1.3
98th%Factor:	2.70	2.70	2.70	2.44	2.70	2.44	2.65	2.65	2.70	2.70	2.65	2.65
HCM2k98thQ:	0.0	0.0	0.0	9.5	0.0	9.5	1.7	1.7	0.0	0.0	1.7	1.7

 Existing Plus Approved Projects Plus Proposed Project PM Peak Hour
 With Recommended Improvements

 Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L --	T --	R	L --	T --	R	L --	T --	R	L --	T --	R
#7 [HCM2k95thQ]:	598	260	157	90	290	477	627	500	761	449	905	16
#9 [HCM2k95thQ]:	0	0	0	192	0	192	33	33	0	0	33	33

Existing Conditions AM Peak Hour

Scenario Report

Scenario: Exist AM Pk Hr

Command: Exist AM Pk Hr
 Volume: Exist AM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: Existing
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

Existing Conditions AM Peak Hour
-----Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	29.2 0.696	C	29.2 0.696	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	C	32.5 0.736	C	32.5 0.736	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	31.1 0.552	C	31.1 0.552	+ 0.000 D/V
# 6 West Lane & Ham Lane	A	9.3 0.233	A	9.3 0.233	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	D	36.0 0.734	D	36.0 0.734	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	31.8 0.678	C	31.8 0.678	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	C	18.5 0.082	C	18.5 0.082	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	C	17.3 0.026	C	17.3 0.026	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	C	17.4 0.054	C	17.4 0.054	+ 0.000 D/V

Existing Conditions AM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 9 Eight Mile Road & Ham Lane	No	No	?? / ??
# 10 Eight Mile Road & Leach Road	No	No	?? / ??
# 11 Eight Mile & MickeGrove/Holman	No	No	?? / ??

Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	18 0 9	8 535 0	0 438 21
ApproachDel:	xxxxxx	18.5	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=27]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1029]
SUCCEED - Total volume greater than or equal to 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	18 0 9	8 535 0	0 438 21
Major Street Volume:	1002			
Minor Approach Volume:	27			
Minor Approach Volume Threshold:	219			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 632 0	0 452 5
ApproachDel:	xxxxxx	17.3	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1104]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 632 0	0 452 5
Major Street Volume:	1094			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	195			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 10	15 545 0	0 457 14
ApproachDel:	xxxxxx	17.4	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=21]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1052]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various movement and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with movement and control data.

Volume Module:AM Peak Hour

Table with 12 columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include various volume and adjustment factors.

Saturation Flow Module:

Table with 10 columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and adjustment data.

Capacity Analysis Module:

Table with 11 columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows include capacity and delay analysis data.

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.552
Loss Time (sec): 12 Average Delay (sec/veh): 31.1
Optimal Cycle: 44 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.233
 Loss Time (sec): 9 Average Delay (sec/veh): 9.3
 Optimal Cycle: 24 Level Of Service: A

Street Name: Ham Lane West Lane

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Permitted Protected Protected
 Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 1 0 0 0 0 1 1 1 0 1 0 1 1 0

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Volume Module:AM Peak Hour

Base Vol: 9 5 17 4 8 53 13 409 0 10 518 4
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 9 5 17 4 8 53 13 409 0 10 518 4
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 10 5 18 4 9 58 14 445 0 11 563 4
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 10 5 18 4 9 58 14 445 0 11 563 4
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 10 5 18 4 9 58 14 445 0 11 563 4

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.93 0.95 0.93 0.93 0.93
 Lanes: 0.29 0.16 0.55 0.06 0.12 0.82 1.00 2.00 0.00 1.00 1.98 0.02
 Final Sat.: 468 260 883 101 202 1336 1769 3538 0 1769 3507 27

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Capacity Analysis Module:

Vol/Sat: 0.02 0.02 0.02 0.04 0.04 0.04 0.01 0.13 0.00 0.01 0.16 0.16
 Crit Moves: ****
 Green/Cycle: 0.19 0.19 0.19 0.19 0.19 0.19 0.03 0.69 0.00 0.03 0.69 0.69
 Volume/Cap: 0.11 0.11 0.11 0.23 0.23 0.23 0.23 0.18 0.00 0.18 0.23 0.23
 Delay/Veh: 34.1 34.1 34.1 35.1 35.1 35.1 49.0 5.5 0.0 48.4 5.8 5.8
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 34.1 34.1 34.1 35.1 35.1 35.1 49.0 5.5 0.0 48.4 5.8 5.8
 LOS by Move: C C C D D D D A A D A A
 HCM2k95thQ: 44 44 44 95 95 95 35 43 0 26 59 59

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Operations Method

Base Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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HCM Ops Adjusted Lane Utilization Module:

Lanes: 0 0 1 0 0 0 0 1 0 1 1 0 1 0 1 1 0

Lane Group: LTR LTR LTR LTR LTR LTR L RT RT L RT RT

#LnsInGrps: 1 1 1 1 1 1 1 2 2 1 2 2

-----|-----|-----|-----|

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12

CrsswalkWid: 8 8 8 8 8 8 8 8

% Hev Veh: 2 2 2 2 2 2 2 2

Grade: 0% 0% 0% 0%

Parking/Hr: No No No No

Bus Stp/Hr: 0 0 0 0

Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >

>

Cnft Ped/Hr: 0 0 0 0

ExclusivERT: Include Include Include Include

% RT Prtct: 0 0 0 0

-----|-----|-----|-----|

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 5 5 5 5 5 5 1 xxxx xxxx 1 xxxx xxxx

-----|-----|-----|-----|

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

RT Adj: 0.93 0.93 0.93 0.89 0.89 0.89 0.93 0.93 0.93 0.93 0.93 0.93

LT Adj: 0.93 0.93 0.93 0.99 0.99 0.99 0.95 0.95 0.95 0.95 0.95 0.95

PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

HCM Sat Adj: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.98 1.00 0.93 0.98 0.98

Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95

Fnl Sat Adj: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.93 0.95 0.93 0.93 0.93

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Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >

>

Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >

>

DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, etc.

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.734
Loss Time (sec): 12 Average Delay (sec/veh): 36.0
Optimal Cycle: 64 Level Of Service: D

Table with 5 columns: Street Name, West Lane, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes.

Table with 12 columns: Volume Module: AM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with 12 columns: Saturation Flow Module. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Table with 12 columns: Capacity Analysis Module. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Table with 16 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps.

Table with 16 columns: HCM Ops Input Saturation Adj Module. Rows include Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table with 16 columns: HCM Ops f(lt) Adj Case Module. Row includes f(lt) Case.

Table with 16 columns: HCM Ops Saturation Adj Module. Rows include Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with 16 columns: Delay Adjustment Factor Module. Rows include Coordinated, Signal Type.

Table with 16 columns: DelAdjFctr. Row includes DelAdjFctr.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note.

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane
Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [18.5]
Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 0
Volume Module:AM Peak Hour
Base Vol: 0 0 0 18 0 9 8 535 0 0 438 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 18 0 9 8 535 0 0 438 21
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 20 0 10 9 582 0 0 476 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 20 0 10 9 582 0 0 476 23
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx 1086 1086 488 499 xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx 239 216 580 1065 xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx 238 214 580 1065 xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx 0.08 0.00 0.02 0.01 xxxx xxxxx xxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx 296 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 0.3 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 18.5 xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * C * * * * * A * * * * *
ApproachDel: xxxxxx 18.5 xxxxxxx xxxxxxx
ApproachLOS: * C * * *
Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113
Dist(miles): 0.250
Speed (mph): 1.00
SignalIndex: #21
Cycle Time: 100 secs
InitVolume: 0 487
Saturation: 0 3538
ArrivalType: 0 4
G/C: 0.00 0.91
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.000 1.213
gq1: 0.00 -2.93
gq2: 0.00 -0.66
gq: 0.00 -3.59
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.550
beta: 0.645
ta (secs): 900.000
F: 0.003
f: 1.000 1.000
vcmax: 0 -40
vcg: 0 136
vcmin: 1000 1000
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:1091 1098 582 1086 1086 488 499 xxxxx xxxxx 0 xxxxx xxxxx
AdjCnflVol: 1091 1098 582 1086 1086 488 499 xxxxx xxxxx 0 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol:1091 1098 582 1086 1086 488 499 xxxxx xxxxx 0 xxxxx xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 192 213 513 239 216 580 1065 xxxxx xxxxx 1623 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 192 213 513 239 216 580 1065 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road
Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [17.3]
Street Name: Leach Road Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0
Volume Module:AM Peak Hour
Base Vol: 0 0 0 5 0 5 5 632 0 0 452 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 5 0 5 5 632 0 0 452 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 5 0 5 5 687 0 0 491 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 5 0 5 5 687 0 0 491 5
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx 1192 1192 494 497 xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx 207 187 575 1067 xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx 206 186 575 1067 xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx 0.03 0.00 0.01 0.01 xxxx xxxxx xxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.4 xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx 303 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 0.1 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 17.3 xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * C * * * * * A * * * * *
ApproachDel: xxxxxx 17.3 xxxxxxx xxxxxxx
ApproachLOS: * C * *
Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113
Dist(miles): 0.250
Speed (mph): 1.00
SignalIndex: #21
Cycle Time: 100 secs
InitVolume: 0 487
Saturation: 0 3538
ArrivalType: 0 4
G/C: 0.00 0.91
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.000 1.213
gq1: 0.00 -2.93
gq2: 0.00 -0.66
gq: 0.00 -3.59
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.550
beta: 0.645
ta (secs): 900.000
F: 0.003
f: 1.000 1.000
vcmax: 0 -40
vcg: 0 136
vcmin: 1000 1000
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:1195 1195 687 1192 1192 494 497 xxxxx xxxxx 0 xxxxx xxxxx
AdjCnflVol: 1195 1195 687 1192 1192 494 497 xxxxx xxxxx 0 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol:1195 1195 687 1192 1192 494 497 xxxxx xxxxx 0 xxxxx xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 163 186 447 207 187 575 1067 xxxxx xxxxx 1623 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 163 186 447 207 187 575 1067 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

 Intersection #11 Eight Mile & MickeGrove/Holman

 Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [17.4]

 Street Name: Micke Grove Road/Holman Road Eight Mile Road
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
 -----|-----|-----|-----|
 Volume Module:AM Peak Hour
 Base Vol: 0 0 0 11 0 10 15 545 0 0 457 14
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 11 0 10 15 545 0 0 457 14
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 0 0 0 12 0 11 16 592 0 0 497 15
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 0 0 0 12 0 11 16 592 0 0 497 15
 -----|-----|-----|-----|
 Critical Gap Module:
 Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
 FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
 -----|-----|-----|-----|
 Capacity Module:
 Cnflct Vol: xxxx xxxx xxxxx 1129 1129 504 512 xxxx xxxxx xxxx xxxx xxxxx
 Potent Cap.: xxxx xxxx xxxxx 226 204 568 1053 xxxx xxxxx xxxx xxxx xxxxx
 Move Cap.: xxxx xxxx xxxxx 223 201 568 1053 xxxx xxxxx xxxx xxxx xxxxx
 Volume/Cap: xxxx xxxx xxxxx 0.05 0.00 0.02 0.02 xxxx xxxxx xxxx xxxx xxxxx
 -----|-----|-----|-----|
 Level Of Service Module:
 2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 1.2 xxxx xxxxx xxxx xxxx xxxxx
 Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.5 xxxx xxxxx xxxxx xxxx xxxxx
 LOS by Move: * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxx xxxx xxxxx xxxx 313 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
 SharedQueue:xxxxx xxxx xxxxx xxxxx 0.2 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
 Shrd ConDel:xxxxx xxxx xxxxx xxxxx 17.4 xxxxx 8.5 xxxx xxxxx xxxxx xxxx xxxxx
 Shared LOS: * * * * * C * * * * *
 ApproachDel: xxxxxx 17.4 xxxxxx xxxxxx
 ApproachLOS: * C * * *

 Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Base Volume Alternative

 Intersection #11 Eight Mile & MickeGrove/Holman

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 HevVeh: 2% 2% 2% 2%
 Grade: 0% 0% 0% 0%
 Peds/Hour: 0 0 0 0
 Pedestrian Walk Speed: 4.00 feet/sec
 LaneWidth: 12 feet 12 feet 12 feet 12 feet
 Time Period: 0.25 hour

Existing Conditions AM Peak Hour
-----Base Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	250	167	234	42	353	353	143	597	46	284	366	5
#4 [HCM2k95thQ]:	92	367	357	91	568	83	183	621	621	355	506	506
#5 [HCM2k95thQ]:	31	317	317	250	264	264	320	320	320	315	315	315
#6 [HCM2k95thQ]:	44	44	44	95	95	95	35	43	0	26	59	59
#7 [HCM2k95thQ]:	420	183	183	62	477	477	246	525	507	277	495	495
#8 [HCM2k95thQ]:	99	262	412	346	271	16	219	219	177	230	460	460
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	8.2	8.2	8.2	0.6	0.6	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	2.8	2.8	2.8	0.4	0.4	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	5.9	5.9	5.9	1.2	1.2	xxxx	xxxx	xxxx	xxxx

Existing Plus Phase 1 AM Peak Hour

Scenario Report

Scenario: Exist + Ph 1 AM
Command: Exist + Ph 1 AM
Volume: Exist AM Pk Hr
Geometry: Existing
Impact Fee: Default Impact Fee
Trip Generation: AM Pk Hr
Trip Distribution: Existing
Paths: Phase 1
Routes: Default Route
Configuration: Default Configuration

Existing Plus Phase 1 AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.61	0.28	22	10	32	100.0
1	Gill Med Ctr	0.00	MedOffBldg	KSF 2.17	0.61	0	0	0	0.0
1	Gill Med Ctr	0.00	Hospital	KSF 0.61	0.28	0	0	0	0.0
Zone 1 Subtotal						22	10	32	100.0
TOTAL						22	10	32	100.0

Existing Plus Phase 1 AM Peak Hour

Trip Distribution Report

Percent Of Trips Existing

Zone	To Gates											
	1	2	3	4	5	6	7	8	9	11	12	
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	2.2	22.8	0.0	0.0	
Zone	To Gates											
	13	14	15	17	18	19	20	21	22	23	24	
1	3.0	22.3	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4	0.3	
Zone	To Gates											
	25											
1	2.2											

Existing Plus Phase 1 AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3	Eight Mile Rd & Davis Rd	C	29.2 0.696	C	29.2 0.698	+ 0.057 D/V
# 4	Eight Mile & Lower Sacramento	C	32.5 0.736	C	32.7 0.739	+ 0.157 D/V
# 5	West Lane & Armstrong Road	C	31.1 0.552	C	31.1 0.552	-0.003 D/V
# 6	West Lane & Ham Lane	A	9.3 0.233	A	9.9 0.240	+ 0.644 D/V
# 7	West Lane & Eight Mile Road	D	36.0 0.734	D	36.5 0.737	+ 0.434 D/V
# 8	West Lane & Morada Lane	C	31.8 0.678	C	31.9 0.679	+ 0.022 D/V
# 9	Eight Mile Road & Ham Lane	C	18.5 0.082	C	18.7 0.084	+ 0.214 D/V
# 10	Eight Mile Road & Leach Road	C	17.3 0.026	C	17.5 0.027	+ 0.177 D/V
# 11	Eight Mile & MickeGrove/Holman	C	17.4 0.054	C	17.5 0.054	+ 0.165 D/V
# 22	West Lane & W Project Driveway	A	0.0 0.000	A	9.7 0.014	+ 9.711 D/V

Existing Plus Phase 1 AM Peak Hour

Intersection	Signal Warrant Summary Report	Future Met
	Base Met	[Del / Vol]
	[Del / Vol]	
# 9 Eight Mile Road & Ham Lane	???	No / No
# 10 Eight Mile Road & Leach Road	???	No / No
# 11 Eight Mile & MickeGrove/Holman	???	No / No
# 22 West Lane & W Project Driveway	???	No / No

Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	18 0 9	8 538 0	0 445 21
ApproachDel:	xxxxxx	18.7	xxxxxx	xxxxxx

-----|-----|-----|-----|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=27]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1039]
SUCCEED - Total volume greater than or equal to 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	18 0 9	8 538 0	0 445 21
Major Street Volume:	1012			
Minor Approach Volume:	27			
Minor Approach Volume Threshold:	216			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 635 0	0 459 5
ApproachDel:	xxxxxx	17.5	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1114]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 635 0	0 459 5
Major Street Volume:	1104			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	193			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 10	15 548 0	0 463 14
ApproachDel:	xxxxxx	17.5	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=21]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1061]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 10	15 548 0	0 463 14
Major Street Volume:	1040			
Minor Approach Volume:	21			
Minor Approach Volume Threshold:	209			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 419 22	0 597 0	0 0 0 0	0 0 10
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	9.7

Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1048]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Phase 1 AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Initial Vol, Major Street Volume, Minor Approach Volume, Minor Approach Volume Threshold. Rows include North, South, East, and West bound movements.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North, South, East, and West bound movements for Davis Road and Eight Mile Road.

Volume Module:AM Peak Hour

Table with 12 columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module:

Table with 10 columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 10 columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.739
Loss Time (sec): 12 Average Delay (sec/veh): 32.7
Optimal Cycle: 65 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for Lower Sacramento Road and Eight Mile Road.

Volume Module:AM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type.

Table with columns for DelAdjFctr.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.552
Loss Time (sec): 12 Average Delay (sec/veh): 31.1
Optimal Cycle: 44 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound movements and Protected, Split Phase controls.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include various volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Saturation Flow Module data.

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ. Rows include Capacity Analysis Module data.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

 Intersection #6 West Lane & Ham Lane

 Cycle (sec): 100 Critical Vol./Cap. (X): 0.240
 Loss Time (sec): 9 Average Delay (sec/veh): 9.9
 Optimal Cycle: 24 Level Of Service: A

 Street Name: Ham Lane West Lane
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Permitted Permitted Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
 Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

 Volume Module: AM Peak Hour
 Base Vol: 9 5 17 4 8 53 13 409 0 10 518 4
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 9 5 17 4 8 53 13 409 0 10 518 4
 Added Vol: 0 0 0 0 0 0 10 0 0 0 1 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 9 5 17 4 8 53 23 409 0 10 519 4
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 10 5 18 4 9 58 25 445 0 11 564 4
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 10 5 18 4 9 58 25 445 0 11 564 4
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 10 5 18 4 9 58 25 445 0 11 564 4

 Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.93 0.95 0.93 0.93 0.93
 Lanes: 0.29 0.16 0.55 0.06 0.12 0.82 1.00 2.00 0.00 1.00 1.98 0.02
 Final Sat.: 467 259 882 101 202 1336 1769 3538 0 1769 3507 27

 Capacity Analysis Module:
 Vol/Sat: 0.02 0.02 0.02 0.04 0.04 0.04 0.01 0.13 0.00 0.01 0.16 0.16
 Crit Moves: **** **** ****
 Green/Cycle: 0.18 0.18 0.18 0.18 0.18 0.18 0.06 0.70 0.00 0.03 0.67 0.67
 Volume/Cap: 0.12 0.12 0.12 0.24 0.24 0.24 0.24 0.18 0.00 0.18 0.24 0.24
 Delay/Veh: 34.5 34.5 34.5 35.6 35.6 35.6 46.1 5.3 0.0 48.4 6.5 6.5
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 34.5 34.5 34.5 35.6 35.6 35.6 46.1 5.3 0.0 48.4 6.5 6.5
 LOS by Move: C C C D D D D A A D A A
 HCM2k95thQ: 45 45 45 97 97 97 50 41 0 26 73 73

 Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

 Intersection #6 West Lane & Ham Lane

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 HCM Ops Adjusted Lane Utilization Module:
 Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
 Lane Group: LTR LTR LTR LTR LTR LTR L RT RT L RT RT
 #LnsInGrps: 1 1 1 1 1 1 1 2 2 1 2 2
 HCM Ops Input Saturation Adj Module:
 Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
 CrsswalkWid: 8 8 8 8 8 8
 % Hev Veh: 2 2 2 2
 Grade: 0% 0% 0% 0%
 Parking/Hr: No No No No
 Bus Stp/Hr: 0 0 0 0
 Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > >
 Cnft Ped/Hr: 0 0 0 0
 ExclusivERT: Include Include Include Include
 % RT Prtct: 0 0 0 0
 HCM Ops f(lt) Adj Case Module:
 f(lt) Case: 5 5 5 5 5 5 1 xxxx xxxx 1 xxxx xxxx
 HCM Ops Saturation Adj Module:
 Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 RT Adj: 0.93 0.93 0.93 0.89 0.89 0.89 1.00 1.00 1.00 1.00 1.00 1.00
 LT Adj: 0.93 0.93 0.93 0.99 0.99 0.99 0.95 0.95 0.95 0.95 0.95 0.95
 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 HCM Sat Adj: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.98 1.00 0.93 0.98 0.98
 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
 Fnl Sat Adj: 0.85 0.85 0.85 0.86 0.86 0.86 0.93 0.93 0.95 0.93 0.93 0.93
 Delay Adjustment Factor Module:
 Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > >
 Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > >
 DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ, and a Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [18.7]

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:AM Peak Hour

Base Vol: 0 0 0 18 0 9 8 535 0 0 438 21

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 18 0 9 8 535 0 0 438 21

Added Vol: 0 0 0 0 0 0 0 3 0 0 7 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 18 0 9 8 538 0 0 445 21

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 20 0 10 9 585 0 0 484 23

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 20 0 10 9 585 0 0 484 23

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1097 1097 495 507 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 236 213 574 1058 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 234 211 574 1058 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.08 0.00 0.02 0.01 xxxx xxxxx xxxx xxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx 292 xxxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx 0.3 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx 18.7 xxxxx 8.4 xxxxx xxxxx xxxxx xxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 18.7 xxxxxxx xxxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 490

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.95

gq2: 0.00 -0.67

gq: 0.00 -3.62

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -40

vcg: 0 137

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1102 1109 585 1097 1097 495 507 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1102 1109 585 1097 1097 495 507 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1102 1109 585 1097 1097 495 507 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 189 210 511 236 213 574 1058 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 189 210 511 236 213 574 1058 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [17.5]

Street Name: Leach Road Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0

Volume Module:AM Peak Hour

Base Vol: 0 0 0 5 0 5 5 632 0 0 452 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 5 0 5 5 632 0 0 452 5

Added Vol: 0 0 0 0 0 0 0 0 3 0 0 7 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 5 0 5 5 635 0 0 459 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 5 0 5 5 690 0 0 499 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 5 0 5 5 690 0 0 499 5

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1203 1203 502 504 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 204 184 570 1060 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 203 183 570 1060 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.03 0.00 0.01 0.01 xxxx xxxxx xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.4 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx 299 xxxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx 0.1 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx 17.5 xxxxx 8.4 xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 17.5 xxxxxxx xxxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 490

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.95

gq2: 0.00 -0.67

gq: 0.00 -3.62

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -40

vchg: 0 137

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1205 1205 690 1203 1203 502 504 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1205 1205 690 1203 1203 502 504 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1205 1205 690 1203 1203 502 504 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 161 184 445 204 184 570 1060 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 161 184 445 204 184 570 1060 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #11 Eight Mile & MickeGrove/Holman

 Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [17.5]

 Street Name: Micke Grove Road/Holman Road Eight Mile Road
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
 -----|-----|-----|-----|
 Volume Module:AM Peak Hour
 Base Vol: 0 0 0 11 0 10 15 545 0 0 457 14
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 11 0 10 15 545 0 0 457 14
 Added Vol: 0 0 0 0 0 0 0 3 0 0 6 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 11 0 10 15 548 0 0 463 14
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 0 0 0 12 0 11 16 596 0 0 503 15
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 0 0 0 12 0 11 16 596 0 0 503 15
 -----|-----|-----|-----|
 Critical Gap Module:
 Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
 FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
 -----|-----|-----|-----|
 Capacity Module:
 Cnflct Vol: xxxx xxxx xxxxx 1139 1139 511 518 xxxx xxxxx xxxx xxxx xxxxx
 Potent Cap.: xxxx xxxx xxxxx 222 201 563 1048 xxxx xxxxx xxxx xxxx xxxxx
 Move Cap.: xxxx xxxx xxxxx 220 198 563 1048 xxxx xxxxx xxxx xxxx xxxxx
 Volume/Cap: xxxx xxxx xxxxx 0.05 0.00 0.02 0.02 xxxx xxxxx xxxx xxxx xxxxx
 -----|-----|-----|-----|
 Level Of Service Module:
 2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 1.2 xxxx xxxxx xxxx xxxx xxxxx
 Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.5 xxxx xxxxx xxxxx xxxx xxxxx
 LOS by Move: * * * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxx xxxx xxxxx xxxx 310 xxxxx xxxx xxxx xxxxx xxxxx xxxxx
 SharedQueue:xxxxx xxxx xxxxx xxxxx 0.2 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
 Shrd ConDel:xxxxx xxxxx xxxxx xxxxx 17.5 xxxxx 8.5 xxxx xxxxx xxxxx xxxx xxxxx
 Shared LOS: * * * * * C * A * * * * *
 ApproachDel: xxxxxx 17.5 xxxxxx xxxxxx
 ApproachLOS: * C * * *

 Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

 Intersection #11 Eight Mile & MickeGrove/Holman

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 HevVeh: 2% 2% 2% 2%
 Grade: 0% 0% 0% 0%
 Peds/Hour: 0 0 0 0
 Pedestrian Walk Speed: 4.00 feet/sec
 LaneWidth: 12 feet 12 feet 12 feet 12 feet
 Time Period: 0.25 hour

Existing Plus Phase 1 AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 West Lane & W Project Driveway

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.7]

Table with columns: Street Name, West Lane, West Project Driveway, Approach, Movement, Control, Rights, Lanes. Includes data for North and South bounds.

Volume Module:AM Peak Hour

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume. Includes data for West Lane and West Project Driveway.

Critical Gap Module:

Table with columns: Critical Gp, FollowUpTim. Values: 6.9, 3.3

Capacity Module:

Table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Values: 228, 775, 775, 0.01

Level Of Service Module:

Table with columns: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Values: 1.1, 9.7, A, 9.7, A

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #22 West Lane & W Project Driveway

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Includes data for HevVeh, Grade, Peds/Hour, Pedestrian Walk Speed, LaneWidth, Time Period.

Existing Plus Phase 1 AM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L --	T --	R	L --	T --	R	L --	T --	R	L --	T --	R
#3 [HCM2k95thQ]:	251	167	238	42	354	354	143	600	46	286	366	5
#4 [HCM2k95thQ]:	92	369	365	92	571	83	183	627	627	358	506	506
#5 [HCM2k95thQ]:	32	317	317	250	265	265	320	320	320	315	315	315
#6 [HCM2k95thQ]:	45	45	45	97	97	97	50	41	0	26	73	73
#7 [HCM2k95thQ]:	422	189	189	68	482	482	266	527	509	278	519	519
#8 [HCM2k95thQ]:	100	266	412	346	272	16	219	219	178	230	461	461
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	8.3	8.3	8.3	0.6	0.6	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	2.8	2.8	2.8	0.4	0.4	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	5.9	5.9	5.9	1.2	1.2	xxxx	xxxx	xxxx	xxxx
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.1

 Existing Plus Phase 1 PM Peak Hour

Scenario Report

Scenario: Exist + Ph 1 PM
 Command: Exist + Ph 1 PM
 Volume: Exist PM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: Existing
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Phase 1 PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.31	0.66	11	24	35	100.0
1	Gill Med Ctr	0.00	MedOffBldg	KSF 0.97	2.49	0	0	0	0.0
1	Gill Med Ctr	0.00	Hospital	KSF 0.31	0.66	0	0	0	0.0
Zone 1 Subtotal						11	24	35	100.0
TOTAL						11	24	35	100.0

Existing Plus Phase 1 PM Peak Hour

Trip Distribution Report

Percent Of Trips Existing

Zone	To Gates											
	1	2	3	4	5	6	7	8	9	11	12	
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	2.2	22.8	0.0	0.0	
Zone	To Gates											
	13	14	15	17	18	19	20	21	22	23	24	
1	3.0	22.3	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4	0.3	
Zone	To Gates											
	25											
1	2.2											

Existing Plus Phase 1 PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3	Eight Mile Rd & Davis Rd	C	25.1 0.695	C	25.2 0.698	+ 0.116 D/V
# 4	Eight Mile & Lower Sacramento	D	41.5 0.859	D	41.8 0.863	+ 0.369 D/V
# 5	West Lane & Armstrong Road	C	30.4 0.631	C	30.4 0.631	+ 0.000 D/V
# 6	West Lane & Ham Lane	A	5.6 0.211	A	6.9 0.212	+ 1.293 D/V
# 7	West Lane & Eight Mile Road	C	33.1 0.743	C	33.8 0.754	+ 0.612 D/V
# 8	West Lane & Morada Lane	C	27.7 0.600	C	27.7 0.601	+ 0.008 D/V
# 9	Eight Mile Road & Ham Lane	C	18.4 0.060	C	18.6 0.061	+ 0.169 D/V
# 10	Eight Mile Road & Leach Road	C	17.9 0.026	C	18.0 0.026	+ 0.158 D/V
# 11	Eight Mile & MickeGrove/Holman	C	23.4 0.177	C	23.7 0.180	+ 0.305 D/V
# 22	West Lane & W Project Driveway	A	0.0 0.000	B	10.5 0.038	+10.478 D/V

Existing Plus Phase 1 PM Peak Hour

Intersection	Signal Warrant Summary Report Base Met [Del / Vol]	Future Met [Del / Vol]
# 9 Eight Mile Road & Ham Lane	?? / ??	No / No
# 10 Eight Mile Road & Leach Road	?? / ??	No / No
# 11 Eight Mile & MickeGrove/Holman	?? / ??	No / No
# 22 West Lane & W Project Driveway	?? / ??	No / No

Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

 Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 14	6 511 0	0 592 19
ApproachDel:	xxxxxx	18.6	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1153]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 14	6 511 0	0 592 19
Major Street Volume:	1128			
Minor Approach Volume:	25			
Minor Approach Volume Threshold:	187			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 481 0	0 598 5
ApproachDel:	xxxxxx	18.0	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1099]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 481 0	0 598 5
Major Street Volume:	1089			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	197			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	31 0 22	16 524 0	0 587 20
ApproachDel:	xxxxxx	23.7	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=53]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1200]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	31 0 22	16 524 0	0 587 20
Major Street Volume:	1147			
Minor Approach Volume:	53			
Minor Approach Volume Threshold:	183			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Phase 1 PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 575 11	0 434 0	0 0 0 0	0 0 0 24
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	10.5

Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=24]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1044]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Phase 1 PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various movement and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 4 columns: Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with movement and control data.

Volume Module: PM Peak Hour

Table with 11 columns showing volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 10 columns showing saturation flow factors: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 10 columns showing capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Table with 12 columns for lane directions (N, S, E, W) and 4 rows for HCM metrics (Cycle, Loss Time, Optimal Cycle, etc.).

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report 2000 HCM Operations Method Future Volume Alternative

Detailed table with 12 columns for lane directions and 15 rows for HCM metrics including saturation, delay, and signal type.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, North Bound, South Bound, East Bound, West Bound, Movement, L, T, R. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.631
Loss Time (sec): 12 Average Delay (sec/veh): 30.4
Optimal Cycle: 51 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	0	0	1	0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	2	2	1	2	2	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsSwalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < Other > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	4	4	4	4	4	4
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.99	0.99	0.99	0.99	0.99	0.95	0.95	0.95
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.99	0.99	0.99	0.99	0.99	0.99
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.97	0.97	0.96	0.96	0.96	0.92	0.92	0.92
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.92	0.92	0.93	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle: 0.00 0.28 0.28 0.10 0.37 0.37 0.09 0.09 0.09 0.42 0.42 0.42												
ArrivalType:	4			4			4			4		
ProgFactor:	1.00	0.94	0.94	0.99	0.85	0.85	0.99	0.99	0.99	0.86	0.86	0.86
Q1:	0.1	7.4	7.4	2.9	4.5	4.5	2.7	2.7	2.7	8.8	8.8	8.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	1.6	1.6	1.4	0.6	0.6	1.4	1.4	1.4	1.6	1.6	1.6
HCM2KQueue:	0.5	9.0	9.0	4.3	5.1	5.1	4.1	4.1	4.1	10.4	10.4	10.4
70th%Factor: 1.20 1.18 1.18 1.19 1.19 1.19 1.19 1.19 1.19 1.18 1.18 1.18												
HCM2k70thQ:	0.6	10.6	10.6	5.1	6.1	6.1	4.9	4.9	4.9	12.3	12.3	12.3
85th%Factor: 1.60 1.52 1.52 1.56 1.55 1.55 1.56 1.56 1.56 1.51 1.51 1.51												
HCM2k85thQ:	0.8	13.7	13.7	6.7	8.0	8.0	6.4	6.4	6.4	15.7	15.7	15.7
90th%Factor: 1.79 1.66 1.66 1.72 1.71 1.71 1.73 1.73 1.73 1.64 1.64 1.64												
HCM2k90thQ:	0.9	14.9	14.9	7.4	8.8	8.8	7.1	7.1	7.1	17.1	17.1	17.1
95th%Factor: 2.08 1.86 1.86 1.97 1.95 1.95 1.98 1.98 1.98 1.84 1.84 1.84												
HCM2k95thQ:	1.0	16.7	16.7	8.5	10.0	10.0	8.1	8.1	8.1	19.1	19.1	19.1
98th%Factor: 2.66 2.20 2.20 2.42 2.37 2.37 2.43 2.43 2.43 2.15 2.15 2.15												
HCM2k98thQ:	1.3	19.8	19.8	10.4	12.2	12.2	10.0	10.0	10.0	22.4	22.4	22.4

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.212
Loss Time (sec): 9 Average Delay (sec/veh): 6.9
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 0 0 0 1 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0
Lane Group: xxxx RT RT LTR LTR LTR L RT RT L RT RT
#LnsInGrps: 0 1 1 1 1 1 1 2 2 1 2 2

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < < Other > > > > > > > > > > > > >

Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: xxxx xxxx xxxx 5 5 5 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: xxxx 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Area Adj: xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx 0.92 0.92 0.92 0.92 0.92 xxxx 1.00 1.00 xxxx 1.00 1.00
LT Adj: xxxx xxxx xxxxxx 0.92 0.92 0.92 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 1.00 0.90 0.90 0.83 0.83 0.83 0.93 0.98 0.98 0.93 0.98 0.98
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95
Fnl Sat Adj: 1.00 0.90 0.90 0.83 0.83 0.83 0.93 0.93 0.93 0.93 0.93 0.93

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < < No > > > > > > > > > > > > >

Signal Type: < < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjPctr: 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.754
Loss Time (sec): 12 Average Delay (sec/veh): 33.8
Optimal Cycle: 68 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Volume Module: PM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module: Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module:

Table with columns for Coordinated, Signal Type, DelAdjFctr.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, West Bound and rows for various traffic metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0 0 0 0 0 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 4 4 xxxx 4 4 4
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 1.00 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 1.00 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx xxxx 0.85 0.96 0.96 0.96
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.98 0.98 xxxxxx 0.97 0.97 0.97
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.96 0.96 0.83 0.91 0.91 0.91
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 0.97 0.95 1.00 1.00 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.90 0.93 0.83 0.93 0.93 0.83 0.96 0.96 0.83 0.91 0.91 0.91
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.05 0.35 0.35 0.17 0.47 0.47 0.04 0.04 0.04 0.32 0.32 0.32
ArrivalType: 4 4 4 4 4 4 4 4 4 4 4 4
ProgFactor: 0.99 0.89 0.90 0.97 0.76 0.71 0.99 0.99 0.99 0.89 0.92 0.92
Q1: 0.8 6.7 6.8 4.5 4.0 0.1 1.2 1.2 1.1 4.6 7.1 7.1
UpstreamVC: 0.00 0.00 0.00 0.24 0.24 0.24 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.98 0.98 0.98 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 0.35 0.66 0.60 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 0.5 1.1 1.4 0.5 0.3 0.0 1.0 1.0 1.1 0.7 1.4 1.4
HCM2KQueue: 1.3 7.8 8.2 5.0 4.3 0.1 2.2 2.2 2.3 5.3 8.5 8.5
70th%Factor: 1.20 1.18 1.18 1.19 1.19 1.20 1.19 1.19 1.19 1.19 1.18 1.18
HCM2k70thQ: 1.6 9.3 9.7 6.0 5.1 0.1 2.6 2.6 2.7 6.3 10.1 10.1
85th%Factor: 1.59 1.53 1.53 1.55 1.56 1.60 1.58 1.58 1.58 1.55 1.53 1.53
HCM2k85thQ: 2.1 12.0 12.6 7.8 6.7 0.2 3.5 3.5 3.6 8.2 13.0 13.0
90th%Factor: 1.77 1.67 1.67 1.71 1.72 1.80 1.76 1.76 1.76 1.71 1.66 1.66
HCM2k90thQ: 2.3 13.1 13.7 8.6 7.4 0.2 3.9 3.9 4.0 9.0 14.2 14.2
95th%Factor: 2.06 1.89 1.88 1.95 1.97 2.10 2.03 2.03 2.03 1.95 1.87 1.87
HCM2k95thQ: 2.7 14.8 15.5 9.8 8.5 0.3 4.5 4.5 4.6 10.3 16.0 16.0
98th%Factor: 2.60 2.25 2.23 2.38 2.42 2.69 2.54 2.54 2.54 2.37 2.22 2.22
HCM2k98thQ: 3.4 17.6 18.4 12.0 10.4 0.3 5.6 5.6 5.8 12.5 19.0 19.0

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [18.6]

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:PM Peak Hour

Base Vol: 0 0 0 11 0 14 6 504 0 0 589 19

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 11 0 14 6 504 0 0 589 19

Added Vol: 0 0 0 0 0 0 0 7 0 0 3 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 11 0 14 6 511 0 0 592 19

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 12 0 15 7 555 0 0 643 21

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 12 0 15 7 555 0 0 643 21

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxxx 1222 1222 654 664 xxxx xxxxxx xxxx xxxx xxxxxx

Potent Cap.: xxxx xxxx xxxxxx 198 179 467 925 xxxx xxxxxx xxxx xxxx xxxxxx

Move Cap.: xxxx xxxx xxxxxx 197 178 467 925 xxxx xxxxxx xxxx xxxx xxxxxx

Volume/Cap: xxxx xxxx xxxxx 0.06 0.00 0.03 0.01 xxxx xxxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxxx xxxx xxxx xxxxxx 0.5 xxxx xxxxxx xxxx xxxx xxxxxx

Control Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 8.9 xxxx xxxxxx xxxxxx xxxx xxxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxxx xxxx 291 xxxxxx xxxx xxxx xxxxxx

SharedQueue:xxxxx xxxx xxxxxx xxxxxx 0.3 xxxxxx 0.0 xxxx xxxxxx xxxxxx xxxx xxxxxx

Shrd ConDel:xxxxx xxxxxx xxxxxx xxxxxx 18.6 xxxxxx 8.9 xxxx xxxxxx xxxxxx xxxx xxxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 18.6 xxxxxxxx xxxxxxxx

ApproachLOS: * C * * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 443

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.67

gq2: 0.00 -0.53

gq: 0.00 -3.20

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -36

vcg: 0 124

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1230 1233 555 1222 1222 654 664 xxxxxx xxxxxx 0 xxxxxx xxxxxx

AdjCnflVol: 1230 1233 555 1222 1222 654 664 xxxxxx xxxxxx 0 xxxxxx xxxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1230 1233 555 1222 1222 654 664 xxxxxx xxxxxx 0 xxxxxx xxxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 154 177 531 198 179 467 925 xxxxxx xxxxxx 1623 xxxxxx xxxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 154 177 531 198 179 467 925 xxxxxx xxxxxx 1623 xxxxxx xxxxxx

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [18.0]

Street Name: Leach Road Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:PM Peak Hour

Base Vol: 0 0 0 5 0 5 5 474 0 0 595 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 5 0 5 5 474 0 0 595 5

Added Vol: 0 0 0 0 0 0 0 7 0 0 3 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 5 0 5 5 481 0 0 598 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 5 0 5 5 523 0 0 650 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 5 0 5 5 523 0 0 650 5

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1186 1186 653 655 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 208 189 467 932 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 207 187 467 932 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.03 0.00 0.01 0.01 xxxx xxxxx xxxx xxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.4 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.9 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx 287 xxxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx 0.1 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx 18.0 xxxxx 8.9 xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 18.0 xxxxxx xxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 443

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.67

gq2: 0.00 -0.53

gq: 0.00 -3.20

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -36

vcg: 0 124

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub0: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1189 1189 523 1186 1186 653 655 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1189 1189 523 1186 1186 653 655 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1189 1189 523 1186 1186 653 655 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 165 188 554 208 189 467 932 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 165 188 554 208 189 467 932 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Phase 1 PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

```

*****
Intersection #11 Eight Mile & MickeGrove/Holman
*****
Average Delay (sec/veh):      1.2      Worst Case Level Of Service: C[ 23.7]
*****
Street Name:  Micke Grove Road/Holman Road      Eight Mile Road
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Stop Sign      Stop Sign      Uncontrolled      Uncontrolled
Rights:      Include      Include      Include      Include
Lanes:      0 0 0 0 0      0 0 1 0 0 0      0 1 0 0 0      0 0 0 1 0
-----|-----|-----|-----|
Volume Module:PM Peak Hour
Base Vol:      0 0 0 0 31 0 22      16 517 0 0 584 20
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:  0 0 0 0 31 0 22      16 517 0 0 584 20
Added Vol:    0 0 0 0 0 0 0      0 7 0 0 3 0
PasserByVol:  0 0 0 0 0 0 0      0 0 0 0 0 0
Initial Fut:  0 0 0 0 31 0 22      16 524 0 0 587 20
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:  0 0 0 0 34 0 24      17 570 0 0 638 22
Reduct Vol:  0 0 0 0 0 0 0      0 0 0 0 0 0
FinalVolume: 0 0 0 0 34 0 24      17 570 0 0 638 22
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx      6.4 6.5 6.2      4.1 xxxx xxxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx      3.5 4.0 3.3      2.2 xxxx xxxxxx xxxxx xxxx xxxxx
-----|-----|-----|-----|
Capacity Module:
Conflict Vol: xxxx xxxx xxxxx      1253 1253 649      660 xxxx xxxxxx xxxx xxxx xxxxxx
Potent Cap.:  xxxx xxxx xxxxxx      190 172 470      928 xxxx xxxxxx xxxx xxxx xxxxxx
Move Cap.:    xxxx xxxx xxxxxx      187 169 470      928 xxxx xxxxxx xxxx xxxx xxxxxx
Volume/Cap:  xxxx xxxx xxxxx      0.18 0.00 0.05      0.02 xxxx xxxxxx xxxx xxxx xxxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxxx      xxxx xxxx xxxxxx      1.4 xxxx xxxxxx xxxx xxxx xxxxxx
Control Del:xxxxx xxxx xxxxxx      xxxxx xxxx xxxxxx      9.0 xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Movement:    LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx      xxxxx 249 xxxxxx      xxxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx      xxxxxx 0.9 xxxxxx      0.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd ConDel:xxxxx xxxxx xxxxxx      xxxxxx 23.7 xxxxxx      9.0 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS:  * * * * * * * * * * * * * * * * * * * * * * * * * * * *
ApproachDel: xxxxxx      23.7      xxxxxx      xxxxxx
ApproachLOS: * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****

```

Existing Plus Phase 1 PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

```

*****
Intersection #11 Eight Mile & MickeGrove/Holman
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HevVeh:      2%      2%      2%      2%
Grade:      0%      0%      0%      0%
Peds/Hour:    0      0      0      0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:    12 feet      12 feet      12 feet      12 feet
Time Period:  0.25 hour

```

Existing Plus Phase 1 PM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	176	150	159	50	332	332	143	577	56	256	439	2
#4 [HCM2k95thQ]:	117	662	360	210	633	155	245	847	847	493	627	627
#5 [HCM2k95thQ]:	25	418	418	212	251	251	203	203	203	478	478	478
#6 [HCM2k95thQ]:	0	43	43	37	37	37	84	14	14	29	50	50
#7 [HCM2k95thQ]:	463	262	262	60	416	416	330	379	352	136	609	609
#8 [HCM2k95thQ]:	67	370	387	245	213	7	111	111	116	257	400	400
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	7.6	7.6	7.6	0.5	0.5	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	2.9	2.9	2.9	0.4	0.4	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	21.7	21.7	21.7	1.4	1.4	xxxx	xxxx	xxxx	xxxx
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.0

Existing Conditions PM Peak Hour

Scenario Report

Scenario: Exist PM Pk Hr

Command: Exist PM Pk Hr
 Volume: Exist PM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: Existing
 Paths: Phase 1
 Routes: Default Route
 Configuration: Default Configuration

Existing Conditions PM Peak Hour
-----Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	25.1 0.695	C	25.1 0.695	+ 0.000 D/V
# 4 Eight Mile & Lower Sacramento	D	41.5 0.859	D	41.5 0.859	+ 0.000 D/V
# 5 West Lane & Armstrong Road	C	30.4 0.631	C	30.4 0.631	+ 0.000 D/V
# 6 West Lane & Ham Lane	A	5.6 0.211	A	5.6 0.211	+ 0.000 D/V
# 7 West Lane & Eight Mile Road	C	33.1 0.743	C	33.1 0.743	+ 0.000 D/V
# 8 West Lane & Morada Lane	C	27.7 0.600	C	27.7 0.600	+ 0.000 D/V
# 9 Eight Mile Road & Ham Lane	C	18.4 0.060	C	18.4 0.060	+ 0.000 D/V
# 10 Eight Mile Road & Leach Road	C	17.9 0.026	C	17.9 0.026	+ 0.000 D/V
# 11 Eight Mile & MickeGrove/Holman	C	23.4 0.177	C	23.4 0.177	+ 0.000 D/V

Existing Conditions PM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 9 Eight Mile Road & Ham Lane	No	No	?? / ??
# 10 Eight Mile Road & Leach Road	No	No	?? / ??
# 11 Eight Mile & MickeGrove/Holman	No	No	?? / ??

Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 14	6 504 0	0 589 19
ApproachDel:	xxxxxx	18.4	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=25]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1143]
SUCCEED - Total volume greater than or equal to 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 14	6 504 0	0 589 19
Major Street Volume:	1118			
Minor Approach Volume:	25			
Minor Approach Volume Threshold:	190			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 474 0	0 595 5
ApproachDel:	xxxxxx	17.9	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1089]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 474 0	0 595 5
Major Street Volume:	1079			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	199			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	31 0 22	16 517 0	0 584 20
ApproachDel:	xxxxxx	23.4	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=53]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1190]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various movement and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 4 columns: Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with movement and control data.

Volume Module: PM Peak Hour

Table with 12 columns showing volume and adjustment factors for various approaches and movements.

Saturation Flow Module:

Table with 10 columns showing saturation flow and adjustment factors.

Capacity Analysis Module:

Table with 10 columns showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
HCM Ops Adjusted Lane Utilization Module:													
Lanes:	1	0	1	0	1	1	0	0	1	0	1	0	1
Lane Group:	L	T	R	L	RT	RT	L	T	R	L	T	R	
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1	
HCM Ops Input Saturation Adj Module:													
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	
CrsswalkWid:	8			8			8			8			
% Hev Veh:	2			2			2			2			
Grade:	0%			0%			0%			0%			
Parking/Hr:	No			No			No			No			
Bus Stp/Hr:	0			0			0			0			
Area Type:	< < < < < < < < < < < < Other > > > > > > > > > > > > >												
Cnft Ped/Hr:	0			0			0			0			
ExclusiveRT:	Include			Include			Include			Include			
% RT Prtct:	0			0			0			0			
HCM Ops f(lt) Adj Case Module:													
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:													
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
RT Adj:	xxxx	xxxx	0.85	xxxx	0.95	0.95	xxxx	xxxx	0.85	xxxx	xxxx	0.85	
LT Adj:	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	0.95	xxxx	xxxxxx	
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.93	0.93	0.93	0.98	0.83	0.93	0.98	0.83	
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fnl Sat Adj:	0.93	0.98	0.83	0.93	0.93	0.93	0.93	0.98	0.83	0.93	0.98	0.83	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < No > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < Actuated > > > > > > > > > > > > >												
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle: 0.06 0.19 0.19 0.02 0.16 0.16 0.05 0.56 0.56 0.10 0.62 0.62												
ArrivalType: 4 4 4												
ProgFactor:	0.99	0.94	0.95	0.99	0.98	0.98	0.99	0.73	0.59	0.99	0.60	0.47
Q1:	1.9	2.5	2.6	0.4	5.0	5.0	1.5	10.6	0.9	3.3	7.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	1.6	0.5	0.6	0.5	1.9	1.9	1.3	2.2	0.2	1.8	1.7	0.0
HCM2KQueue:	3.5	3.0	3.1	1.0	6.9	6.9	2.8	12.7	1.1	5.1	9.5	0.0
70th%Factor: 1.19 1.19 1.19 1.20 1.18 1.18 1.19 1.17 1.20 1.19 1.18 1.20												
HCM2k70thQ: 4.2 3.6 3.7 1.1 8.2 8.2 3.4 14.9 1.3 6.1 11.2 0.0												
85th%Factor: 1.57 1.57 1.57 1.59 1.54 1.54 1.57 1.50 1.59 1.55 1.52 1.60												
HCM2k85thQ: 5.5 4.7 4.9 1.5 10.7 10.7 4.5 19.1 1.7 8.0 14.4 0.1												
90th%Factor: 1.74 1.74 1.74 1.78 1.68 1.68 1.75 1.61 1.78 1.71 1.65 1.80												
HCM2k90thQ: 6.1 5.2 5.5 1.7 11.7 11.7 5.0 20.5 1.9 8.8 15.6 0.1												
95th%Factor: 1.99 2.01 2.00 2.07 1.91 1.91 2.01 1.80 2.07 1.95 1.85 2.10												
HCM2k95thQ: 7.0 6.0 6.3 2.0 13.2 13.2 5.7 22.9 2.2 10.0 17.6 0.1												
98th%Factor: 2.46 2.50 2.49 2.63 2.29 2.29 2.50 2.08 2.62 2.37 2.18 2.70												
HCM2k98thQ: 8.7 7.4 7.8 2.5 15.9 15.9 7.1 26.4 2.8 12.2 20.7 0.1												

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.631
Loss Time (sec): 12 Average Delay (sec/veh): 30.4
Optimal Cycle: 51 Level Of Service: C

Table with columns for Street Name (West Lane, Armstrong Road) and Movement (North Bound, South Bound, East Bound, West Bound). Rows include Control, Rights, Min. Green, Y+R, Lanes.

Table with columns for Volume Module: PM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, etc.

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.743
Loss Time (sec): 12 Average Delay (sec/veh): 33.1
Optimal Cycle: 66 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for West Lane, South Bound, East Bound, West Bound.

Table with columns for Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ for Capacity Analysis Module.

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lane Group, #LnsInGrps.

Table with columns for HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

Table with columns for HCM Ops f(lt) Adj Case Module, f(lt) Case.

Table with columns for HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with columns for Delay Adjustment Factor Module, Coordinated, Signal Type.

Table with columns for DelAdjFctr.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Table with 13 columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane. Includes Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane
Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [18.4]
Street Name: Ham Lane Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0
Volume Module: PM Peak Hour
Base Vol: 0 0 0 11 0 14 6 504 0 0 589 19
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 11 0 14 6 504 0 0 589 19
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 12 0 15 7 548 0 0 640 21
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 12 0 15 7 548 0 0 640 21
Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 4.1
FollowUpTim: 3.5 4.0 3.3 2.2
Capacity Module:
Cnflct Vol: 1211 1211 651 661
Potent Cap.: 201 182 469 927
Move Cap.: 200 181 469 927
Volume/Cap: 0.06 0.00 0.03 0.01
Level Of Service Module:
2Way95thQ: 0.5
Control Del: 8.9
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 295
SharedQueue: 0.3
Shrd ConDel: 18.4
Shared LOS: C
ApproachDel: 18.4
ApproachLOS: C
Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113
Dist(miles): 0.250
Speed (mph): 1.00
SignalIndex: #21
Cycle Time: 100 secs
InitVolume: 0 436
Saturation: 0 3538
ArrivalType: 0 4
G/C: 0.00 0.91
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.000 1.213
gq1: 0.00 -2.63
gq2: 0.00 -0.52
gq: 0.00 -3.14
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.550
beta: 0.645
ta (secs): 900.000
F: 0.003
f: 1.000 1.000
vcmax: 0 -35
vcg: 0 122
vcmin: 1000 1000
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol: 1219 1222 548 1211 1211 651 661
AdjCnflVol: 1219 1222 548 1211 1211 651 661
UpstreamAdj: 1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol: 1219 1222 548 1211 1211 651 661
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 157 180 536 201 182 469 927
UpstreamAdj: 1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 157 180 536 201 182 469 927

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road
Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [17.9]
Street Name: Leach Road Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0
Volume Module: PM Peak Hour
Base Vol: 0 0 0 5 0 5 5 474 0 0 595 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 5 0 5 5 474 0 0 595 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 5 0 5 5 515 0 0 647 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Volume: 0 0 0 5 0 5 5 515 0 0 647 5
Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 4.1
FollowUpTim: 3.5 4.0 3.3 2.2
Capacity Module:
Cnflct Vol: 1176 1176 649 652
Potent Cap.: 212 191 469 934
Move Cap.: 211 190 469 934
Volume/Cap: 0.03 0.00 0.01 0.01
Level Of Service Module:
2Way95thQ: 0.4
Control Del: 8.9
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 291
SharedQueue: 0.1
Shrd ConDel: 17.9
Shared LOS: C
ApproachDel: 17.9
ApproachLOS: C
Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #10 Eight Mile Road & Leach Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index: #113
Dist(miles): 0.250
Speed (mph): 1.00
SignalIndex: #21
Cycle Time: 100 secs
InitVolume: 0 436
Saturation: 0 3538
ArrivalType: 0 4
G/C: 0.00 0.91
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.000 1.213
gq1: 0.00 -2.63
gq2: 0.00 -0.52
gq: 0.00 -3.14
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.550
beta: 0.645
ta (secs): 900.000
F: 0.003
f: 1.000 1.000
vcmax: 0 -35
vcg: 0 122
vcmin: 1000 1000
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol: 1178 1178 515 1176 1176 649 652
AdjCnflVol: 1178 1178 515 1176 1176 649 652
UpstreamAdj: 1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol: 1178 1178 515 1176 1176 649 652
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap: 168 191 560 212 191 469 934
UpstreamAdj: 1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 168 191 560 212 191 469 934

Existing Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

 Intersection #11 Eight Mile & MickeGrove/Holman

 Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C [23.4]

 Street Name: Micke Grove Road/Holman Road Eight Mile Road
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0
 -----|-----|-----|-----|
 Volume Module:PM Peak Hour
 Base Vol: 0 0 0 31 0 22 16 517 0 0 584 20
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 31 0 22 16 517 0 0 584 20
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 0 0 0 34 0 24 17 562 0 0 635 22
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 0 0 0 34 0 24 17 562 0 0 635 22
 -----|-----|-----|-----|
 Critical Gap Module:
 Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
 FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
 -----|-----|-----|-----|
 Capacity Module:
 Cnflct Vol: xxxx xxxx xxxxx 1242 1242 646 657 xxxx xxxxx xxxx xxxx xxxxx
 Potent Cap.: xxxx xxxx xxxxx 193 175 472 931 xxxx xxxxx xxxx xxxx xxxxx
 Move Cap.: xxxx xxxx xxxxx 190 171 472 931 xxxx xxxxx xxxx xxxx xxxxx
 Volume/Cap: xxxx xxxx xxxxx 0.18 0.00 0.05 0.02 xxxx xxxxx xxxx xxxx xxxxx
 -----|-----|-----|-----|
 Level Of Service Module:
 2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 1.4 xxxx xxxxx xxxx xxxx xxxxx
 Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.9 xxxx xxxxx xxxxx xxxx xxxxx
 LOS by Move: * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxx xxxx xxxxx xxxx 253 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
 SharedQueue:xxxxx xxxx xxxxx xxxxx 0.9 xxxxx 0.1 xxxx xxxxx xxxxx xxxx xxxxx
 Shrd ConDel:xxxxx xxxx xxxxx xxxxx 23.4 xxxxx 8.9 xxxx xxxxx xxxxx xxxx xxxxx
 Shared LOS: * * * * * C * * * * *
 ApproachDel: xxxxxx 23.4 xxxxxxx xxxxxxx
 ApproachLOS: * C * * *

 Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Base Volume Alternative

 Intersection #11 Eight Mile & MickeGrove/Holman

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|
 HevVeh: 2% 2% 2% 2%
 Grade: 0% 0% 0% 0%
 Peds/Hour: 0 0 0 0
 Pedestrian Walk Speed: 4.00 feet/sec
 LaneWidth: 12 feet 12 feet 12 feet 12 feet
 Time Period: 0.25 hour

Existing Conditions PM Peak Hour
-----Base Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
#3 [HCM2k95thQ]:	176	150	157	50	331	331	143	572	56	251	439	2
#4 [HCM2k95thQ]:	116	658	355	209	630	154	244	839	839	485	620	620
#5 [HCM2k95thQ]:	25	418	418	212	251	251	203	203	203	478	478	478
#6 [HCM2k95thQ]:	0	43	43	37	37	37	56	14	14	29	13	13
#7 [HCM2k95thQ]:	457	253	253	46	401	401	320	378	351	136	597	597
#8 [HCM2k95thQ]:	67	368	386	244	211	7	111	111	116	257	400	400
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	7.5	7.5	7.5	0.5	0.5	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	2.9	2.9	2.9	0.4	0.4	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	21.4	21.4	21.4	1.4	1.4	xxxx	xxxx	xxxx	xxxx

 Existing Plus Proposed Project AM Peak Hour

Scenario Report

Scenario: Exist + Proj AM
 Command: Exist + Proj AM
 Volume: Exist AM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: AM Pk Hr
 Trip Distribution: Existing
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Proposed Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.61	0.28	22	10	32	9.9
1	Gill Med Ctr	60.00	MedOffBldg	KSF 2.17	0.61	130	37	167	51.7
1	Gill Med Ctr	140.00	Hospital	KSF 0.61	0.28	85	39	124	38.4
Zone 1 Subtotal						237	86	323	100.0
TOTAL						237	86	323	100.0

Existing Plus Proposed Project AM Peak Hour

Trip Distribution Report

Percent Of Trips Existing

Zone	To Gates											
	1	2	3	4	5	6	7	8	9	11	12	
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	2.2	22.8	0.0	0.0	
Zone	To Gates											
	13	14	15	17	18	19	20	21	22	23	24	
1	3.0	22.3	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4	0.3	
Zone	To Gates											
	25											
1	2.2											

Existing Plus Proposed Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 3 Eight Mile Rd & Davis Rd	C	29.2 0.696	C	29.9 0.717	+ 0.695 D/V
# 4 Eight Mile & Lower Sacramento	C	32.5 0.736	C	34.6 0.774	+ 2.058 D/V
# 5 West Lane & Armstrong Road	C	31.1 0.552	C	31.2 0.556	+ 0.076 D/V
# 6 West Lane & Ham Lane	A	9.3 0.233	B	10.3 0.234	+ 1.080 D/V
# 7 West Lane & Eight Mile Road	D	36.0 0.734	D	38.5 0.792	+ 2.515 D/V
# 8 West Lane & Morada Lane	C	31.8 0.678	C	32.1 0.685	+ 0.236 D/V
# 9 Eight Mile Road & Ham Lane	C	18.5 0.082	C	24.2 0.218	+ 5.737 D/V
# 10 Eight Mile Road & Leach Road	C	17.3 0.026	C	19.1 0.031	+ 1.832 D/V
# 11 Eight Mile & MickeGrove/Holman	C	17.4 0.054	C	18.3 0.062	+ 0.905 D/V
# 22 West Lane & W Project Driveway	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 23 Eight Mile & S Proj Driveway	A	0.0 0.000	B	12.7 0.115	+12.674 D/V
# 24 Ham Ln & E Project Driveway	A	0.0 0.000	A	8.7 0.027	+ 8.738 D/V

Existing Plus Proposed Project AM Peak Hour

Intersection	Signal Warrant Summary Report		Future Met [Del / Vol]
	Base Met [Del / Vol]		
# 9 Eight Mile Road & Ham Lane	???	???	No / No
# 10 Eight Mile Road & Leach Road	???	???	No / No
# 11 Eight Mile & MickeGrove/Holman	???	???	No / No
# 22 West Lane & W Project Driveway	???	???	No / No
# 23 Eight Mile & S Proj Driveway	???	???	No / No
# 24 Ham Ln & E Project Driveway	???	???	No / No

Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	44 0 9	8 535 0	0 473 56
ApproachDel:	xxxxxx	24.2	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1125]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	44 0 9	8 535 0	0 473 56
Major Street Volume:	1072			
Minor Approach Volume:	53			
Minor Approach Volume Threshold:	201			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 658 0	0 522 5
ApproachDel:	xxxxxx	19.1	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1200]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 658 0	0 522 5
Major Street Volume:	1190			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	173			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	11 0 14	16 569 0	0 523 14
ApproachDel:	xxxxxx	18.3	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1147]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	11 0 14	16 569 0	0 523 14
Major Street Volume:	1122			
Minor Approach Volume:	25			
Minor Approach Volume Threshold:	189			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 419 154	0 597 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 419 154	0 597 0	0 0 0 0	0 0 0 0
Major Street Volume:	1170			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	231			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 0 56	0 487 0	0 495 35
ApproachDel:	xxxxxx	12.7	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=56]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1073]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 0 56	0 487 0	0 495 35
Major Street Volume:	1017			
Minor Approach Volume:	56			
Minor Approach Volume Threshold:	215			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Proposed Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	35 29 0	0 27 13	5 0 26	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	8.7	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=31]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=135]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Proposed Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various movement and volume data.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Table with 2 columns: Metric, Value. Rows include Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with movement and control data.

Volume Module: AM Peak Hour

Table with 12 columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 12 columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 0 1 0 1 0 1 0 1 0 1
Lane Group: L T R L RT RT L T R L T R
#LnsInGrps: 1 1 1 1 1 1 1 1 1 1 1 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
Parking/Hr: No No No No No No No No No No No No
Bus Stp/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
Area Type: < < < < < < < < < < Other > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0 0 0 0 0 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx 0.97 0.97 xxxx xxxx 0.85 xxxx xxxx 0.85
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.95 0.95 0.93 0.98 0.83 0.93 0.98 0.83
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.95 0.95 0.93 0.98 0.83 0.93 0.98 0.83
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #3 Eight Mile Rd & Davis Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.10 0.25 0.25 0.01 0.17 0.17 0.08 0.49 0.49 0.13 0.54 0.54
ArrivalType: 4 4 4 4
ProgFactor: 0.99 0.91 0.94 1.00 0.98 0.98 0.99 0.83 0.70 0.98 0.70 0.61
Q1: 3.3 3.0 4.8 0.3 5.5 5.5 1.9 11.9 0.8 4.3 6.6 0.1
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 1.9 0.4 1.1 0.7 2.1 2.1 1.0 2.4 0.1 2.0 1.1 0.0
HCM2KQueue: 5.3 3.4 5.9 1.0 7.6 7.6 2.8 14.2 0.9 6.3 7.7 0.1
70th%Factor: 1.19 1.19 1.19 1.20 1.18 1.18 1.19 1.17 1.20 1.19 1.18 1.20
HCM2k70thQ: 6.2 4.0 7.0 1.2 9.0 9.0 3.4 16.6 1.0 7.5 9.1 0.1
85th%Factor: 1.55 1.57 1.55 1.59 1.53 1.53 1.57 1.49 1.59 1.54 1.53 1.60
HCM2k85thQ: 8.2 5.3 9.1 1.5 11.7 11.7 4.5 21.1 1.4 9.7 11.8 0.1
90th%Factor: 1.71 1.74 1.70 1.78 1.67 1.67 1.75 1.60 1.78 1.69 1.67 1.80
HCM2k90thQ: 9.0 5.9 10.0 1.7 12.8 12.8 5.0 22.7 1.6 10.7 12.8 0.2
95th%Factor: 1.95 2.00 1.93 2.07 1.89 1.89 2.01 1.77 2.07 1.92 1.89 2.10
HCM2k95thQ: 10.2 6.8 11.4 2.0 14.5 14.5 5.7 25.2 1.8 12.1 14.5 0.2
98th%Factor: 2.37 2.47 2.34 2.63 2.26 2.26 2.50 2.03 2.63 2.32 2.25 2.69
HCM2k98thQ: 12.5 8.4 13.7 2.5 17.2 17.2 7.1 28.9 2.3 14.6 17.3 0.2

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.774
Loss Time (sec): 12 Average Delay (sec/veh): 34.6
Optimal Cycle: 72 Level Of Service: C

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 1 0 1 0 1 0 1 0

Volume Module:AM Peak Hour

Base Vol: 21 314 287 28 438 83 85 522 9 202 504 42
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 21 314 287 28 438 83 85 522 9 202 504 42
Added Vol: 0 0 40 5 0 0 0 48 0 15 18 2
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 21 314 327 33 438 83 85 570 9 217 522 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 21 314 327 33 438 83 85 570 9 217 522 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 21 314 327 33 438 83 85 570 9 217 522 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 21 314 327 33 438 83 85 570 9 217 522 44

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98 0.93 0.97 0.97
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.98 0.02 1.00 0.92 0.08
Final Sat.: 1769 1862 1583 1769 1862 1583 1769 1829 29 1769 1697 143

Capacity Analysis Module:

Vol/Sat: 0.01 0.17 0.21 0.02 0.24 0.05 0.05 0.31 0.31 0.12 0.31 0.31
Crit Moves: **** ****
Green/Cycle: 0.02 0.29 0.29 0.03 0.30 0.30 0.08 0.40 0.40 0.16 0.49 0.49
Volume/Cap: 0.77 0.58 0.71 0.71 0.77 0.17 0.63 0.77 0.77 0.77 0.63 0.63
Delay/Veh: 130.4 31.6 36.5 87.4 38.3 25.7 54.4 31.0 31.0 53.0 20.7 20.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 130.4 31.6 36.5 87.4 38.3 25.7 54.4 31.0 31.0 53.0 20.7 20.7
LOS by Move: F C D F D C D C D C C
HCM2k95thQ: 95 384 452 114 600 86 183 689 689 388 505 505

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 0 1 0 1 0 0 1 0
Lane Group: L T R L T R L RT RT L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 1 1 1 1 1

HCM Ops Input Saturation Adj Module:

Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8
% Hev Veh: 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:

f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:

Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 1.00 1.00 xxxx 0.99 0.99
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98 0.93 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.98 0.93 0.97 0.97

Delay Adjustment Factor Module:

Coordinated: < < < < < < < < < < < No > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > > >
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.556
Loss Time (sec): 12 Average Delay (sec/veh): 31.2
Optimal Cycle: 45 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 1 0 1 0 1 1 0 0 0 1! 0 0 0 0 1! 0 0
Lane Group: L RT RT L RT RT LTR LTR LTR LTR LTR LTR
#LnsInGrps: 1 2 2 1 2 2 1 1 1 1 1 1
HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8
% Hev Veh: 2 2 2
Grade: 0% 0% 0%
Parking/Hr: No No No
Bus Stp/Hr: 0 0 0
Area Type: < < < < < < < < < < < < < Other > > > > > > > > > > > > >
>
Cnft Ped/Hr: 0 0 0 0
ExclusiveRT: Include Include Include Include
% RT Prtct: 0 0 0 0
HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 4 4 4 4 4 4 4
HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Bus Stp Adj: xxxx 1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx 0.97 0.97 xxxx 0.99 0.99 1.00 1.00 1.00 0.96 0.96 0.96
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.99 0.99 0.99 0.99 0.99 0.99
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.95 0.95 0.93 0.97 0.97 0.97 0.97 0.97 0.93 0.93 0.93
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 0.95 0.95 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.91 0.91 0.93 0.92 0.92 0.97 0.97 0.97 0.93 0.93 0.93
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >
>
Signal Type: < < < < < < < < < Actuated > > > > > > > > > > > > >
>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Proposed Project AM Peak Hour

Level of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 West Lane & Armstrong Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.01 0.24 0.24 0.16 0.39 0.39 0.23 0.23 0.23 0.25 0.25 0.25
ArrivalType: 4 4 4
ProgFactor: 1.00 0.94 0.94 0.97 0.84 0.84 0.95 0.95 0.95 0.94 0.94 0.94
Q1: 0.2 5.5 5.5 4.0 4.9 4.9 5.5 5.5 5.5 5.5 5.5 5.5
UpstreamVC: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 0.5 1.2 1.2 1.2 0.7 0.7 1.2 1.2 1.2 1.2 1.2 1.2
HCM2KQueue: 0.6 6.7 6.7 5.1 5.5 5.5 6.7 6.7 6.7 6.7 6.7 6.7
70th%Factor: 1.20 1.18 1.18 1.19 1.19 1.19 1.18 1.18 1.18 1.18 1.18 1.18
HCM2k70thQ: 0.7 7.9 7.9 6.1 6.6 6.6 8.0 8.0 8.0 7.9 7.9 7.9
85th%Factor: 1.59 1.54 1.54 1.55 1.55 1.55 1.54 1.54 1.54 1.54 1.54 1.54
HCM2k85thQ: 1.0 10.3 10.3 8.0 8.6 8.6 10.3 10.3 10.3 10.3 10.3 10.3
90th%Factor: 1.79 1.69 1.69 1.71 1.70 1.70 1.69 1.69 1.69 1.69 1.69 1.69
HCM2k90thQ: 1.1 11.3 11.3 8.8 9.4 9.4 11.3 11.3 11.3 11.3 11.3 11.3
95th%Factor: 2.08 1.91 1.91 1.95 1.94 1.94 1.91 1.91 1.91 1.91 1.91 1.91
HCM2k95thQ: 1.3 12.8 12.8 10.0 10.8 10.8 12.9 12.9 12.9 12.8 12.8 12.8
98th%Factor: 2.65 2.30 2.30 2.37 2.35 2.35 2.30 2.30 2.30 2.30 2.30 2.30
HCM2k98thQ: 1.6 15.4 15.4 12.2 13.0 13.0 15.4 15.4 15.4 15.4 15.4 15.4

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.792
Loss Time (sec): 12 Average Delay (sec/veh): 38.5
Optimal Cycle: 75 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Table with columns for Volume Module: AM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

Table with columns for HCM Ops Input Saturation Adj Module, Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExlusiveRT, % RT Prtct.

Table with columns for HCM Ops f(lt) Adj Case Module, f(lt) Case.

Table with columns for HCM Ops Saturation Adj Module, Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Table with columns for Delay Adjustment Factor Module, Coordinated.

Table with columns for Signal Type, DelAdjPctr.

DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and Note.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HCM Ops Adjusted Lane Utilization Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
% Hev Veh: 2 2 1 1 2 1 1 1 1 2 1 1
HCM Ops Input Saturation Adj Module:
Area Type: <<<<<<<<<<<<<<<<< Other >>>>>>>>>>>>>>>>>
HCM Ops f(lt) Adj Case Module:
HCM Ops Saturation Adj Module:
Delay Adjustment Factor Module:
Coordinated: <<<<<<<<<<<<<<<<<< No >>>>>>>>>>>>>>>>>
Signal Type: <<<<<<<<<<<<<< Actuated >>>>>>>>>>>>>>>>>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Green/Cycle: 0.07 0.27 0.27 0.22 0.43 0.43 0.08 0.08 0.08 0.30 0.30 0.30
ArrivalType: 4 4 4
ProgFactor: 0.99 0.92 0.95 0.96 0.81 0.75 0.99 0.99 0.99 0.89 0.94 0.94
Q1: 1.3 5.4 7.0 6.6 5.4 0.3 2.8 2.8 2.2 4.1 8.2 8.2
UpstreamVC: 0.00 0.00 0.00 0.31 0.31 0.31 0.00 0.00 0.00 0.00 0.00 0.00
UpstreamAdj: 0.00 0.00 0.00 0.96 0.96 0.96 0.00 0.00 0.00 0.00 0.00 0.00
EarlyArrAdj: 1.00 1.00 1.00 0.40 0.62 0.56 1.00 1.00 1.00 1.00 1.00 1.00
Q2: 0.7 1.0 2.0 0.8 0.5 0.0 1.7 1.7 1.4 0.6 2.0 2.0
HCM2KQueue: 2.0 6.4 8.9 7.4 5.8 0.3 4.5 4.5 3.6 4.7 10.2 10.2
70th%Factor: 1.20 1.19 1.18 1.18 1.19 1.20 1.19 1.19 1.19 1.19 1.18 1.18
HCM2k70thQ: 2.4 7.6 10.5 8.7 6.9 0.4 5.3 5.3 4.3 5.6 12.0 12.0
85th%Factor: 1.58 1.54 1.52 1.53 1.55 1.60 1.56 1.56 1.57 1.56 1.51 1.51
HCM2k85thQ: 3.1 9.9 13.6 11.3 9.0 0.5 7.0 7.0 5.6 7.3 15.5 15.5
90th%Factor: 1.76 1.69 1.66 1.68 1.70 1.79 1.72 1.72 1.73 1.72 1.64 1.64
HCM2k90thQ: 3.5 10.8 14.8 12.4 9.9 0.6 7.7 7.7 6.2 8.0 16.8 16.8
95th%Factor: 2.04 1.92 1.87 1.90 1.93 2.09 1.97 1.97 1.99 1.96 1.84 1.84
HCM2k95thQ: 4.1 12.3 16.6 14.0 11.3 0.7 8.8 8.8 7.2 9.2 18.8 18.8
98th%Factor: 2.56 2.31 2.20 2.27 2.34 2.68 2.41 2.41 2.46 2.40 2.16 2.16
HCM2k98thQ: 5.1 14.8 19.6 16.8 13.7 0.8 10.8 10.8 8.8 11.2 22.0 22.0

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Eight Mile Road & Ham Lane

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C [24.2]

Street Name: Ham Lane Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:AM Peak Hour

Base Vol: 0 0 0 18 0 9 8 535 0 0 438 21

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 18 0 9 8 535 0 0 438 21

Added Vol: 0 0 0 26 0 0 0 0 0 0 35 35

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 44 0 9 8 535 0 0 473 56

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 48 0 10 9 582 0 0 514 61

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 48 0 10 9 582 0 0 514 61

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxxx 1143 1143 545 575 xxxx xxxxxx xxxx xxxx xxxxxx

Potent Cap.: xxxx xxxx xxxxxx 221 200 539 998 xxxx xxxxxx xxxx xxxx xxxxxx

Move Cap.: xxxx xxxx xxxxxx 220 198 539 998 xxxx xxxxxx xxxx xxxx xxxxxx

Volume/Cap: xxxx xxxx xxxxx 0.22 0.00 0.02 0.01 xxxx xxxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxxx xxxx xxxx xxxxxx 0.7 xxxx xxxxxx xxxx xxxx xxxxxx

Control Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 8.6 xxxx xxxxxx xxxxxx xxxx xxxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxxx xxxx 244 xxxxxx xxxx xxxx xxxxxx xxxxxx

SharedQueue:xxxxx xxxx xxxxxx xxxxxx 0.9 xxxxxx 0.0 xxxx xxxxxx xxxxxx xxxx xxxxxx

Shrd ConDel:xxxxxx xxxxx xxxxxx xxxxxx 24.2 xxxxxx 8.6 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 24.2 xxxxxxxx xxxxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #9 Eight Mile Road & Ham Lane

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 487

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.93

gq2: 0.00 -0.66

gq: 0.00 -3.59

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -40

vcg: 0 136

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1148 1174 582 1143 1143 545 575 xxxxxx xxxxxx 0 xxxxxx xxxxxx

AdjCnflVol: 1148 1174 582 1143 1143 545 575 xxxxxx xxxxxx 0 xxxxxx xxxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1148 1174 582 1143 1143 545 575 xxxxxx xxxxxx 0 xxxxxx xxxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 176 192 513 221 200 539 998 xxxxxx xxxxxx 1623 xxxxxx xxxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 176 192 513 221 200 539 998 xxxxxx xxxxxx 1623 xxxxxx xxxxxx

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [19.1]

Street Name: Leach Road Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:AM Peak Hour

Base Vol: 0 0 0 5 0 5 5 632 0 0 452 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 5 0 5 5 632 0 0 452 5

Added Vol: 0 0 0 0 0 0 0 26 0 0 70 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 5 0 5 5 658 0 0 522 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 5 0 5 5 715 0 0 567 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 5 0 5 5 715 0 0 567 5

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1296 1296 570 573 xxxx xxxxxx xxxx xxxx xxxxxx

Potent Cap.: xxxx xxxx xxxxx 179 162 521 1000 xxxx xxxxxx xxxx xxxx xxxxxx

Move Cap.: xxxx xxxx xxxxx 178 161 521 1000 xxxx xxxxxx xxxx xxxx xxxxxx

Volume/Cap: xxxx xxxx xxxxx 0.03 0.00 0.01 0.01 xxxx xxxxxx xxxx xxxx xxxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.4 xxxx xxxxxx xxxx xxxx xxxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.6 xxxx xxxxxx xxxxx xxxx xxxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx 265 xxxxx xxxx xxxxxx xxxx xxxx xxxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx 0.1 xxxxx 0.0 xxxx xxxxxx xxxxx xxxx xxxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx 19.1 xxxxx 8.6 xxxx xxxxxx xxxxx xxxx xxxxxx

Shared LOS: * * * * * C * * * * *

ApproachDel: xxxxxx 19.1 xxxxxx xxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 487

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.93

gq2: 0.00 -0.66

gq: 0.00 -3.59

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -40

vcg: 0 136

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1299 1299 715 1296 1296 570 573 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1299 1299 715 1296 1296 570 573 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1299 1299 715 1296 1296 570 573 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 138 161 431 179 162 521 1000 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 138 161 431 179 162 521 1000 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 Eight Mile & MickeGrove/Holman
Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [18.3]
Street Name: Micke Grove Road/Holman Road Eight Mile Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 1 0
Volume Module:AM Peak Hour
Base Vol: 0 0 0 11 0 10 15 545 0 0 457 14
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 11 0 10 15 545 0 0 457 14
Added Vol: 0 0 0 0 0 4 1 24 0 0 66 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 11 0 14 16 569 0 0 523 14
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 0 0 0 12 0 15 17 618 0 0 568 15
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 12 0 15 17 618 0 0 568 15
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Conflict Vol: xxxx xxxx xxxxx 1229 1229 576 584 xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx 196 178 517 991 xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx 194 175 517 991 xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx 0.06 0.00 0.03 0.02 xxxx xxxxx xxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 1.3 xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx 298 xxxxx xxxxx xxxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 0.3 xxxxx 0.1 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 18.3 xxxxx 8.7 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * C * * * * *
ApproachDel: xxxxxx 18.3 xxxxxxx xxxxxxx
ApproachLOS: * C * *
Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #11 Eight Mile & MickeGrove/Holman
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
HevVeh: 2% 2% 2% 2%
Grade: 0% 0% 0% 0%
Peds/Hour: 0 0 0 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 West Lane & W Project Driveway

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Table with columns for Street Name, West Lane, and West Project Driveway. Rows include Approach, Movement, Control, Rights, and Lanes.

Table for Volume Module: AM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module. Rows include Critical Gp and FollowUpTim.

Table for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #22 West Lane & W Project Driveway

Table with columns for Approach, North Bound, South Bound, East Bound, and West Bound. Rows include Movement, HevVeh, Grade, Peds/Hour, Pedestrian Walk Speed, LaneWidth, and Time Period.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B [12.7]

Street Name: South Project Driveway Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:AM Peak Hour

Base Vol: 0 0 0 0 0 0 0 0 487 0 0 0 495 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 0 0 0 487 0 0 0 495 0

Added Vol: 0 0 0 0 0 0 56 0 0 0 0 0 0 35

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 0 0 0 56 0 487 0 0 0 495 35

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 0 0 0 61 0 529 0 0 0 538 38

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 0 0 0 61 0 529 0 0 0 538 38

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 557 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 530 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 530 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.11 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

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Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 9.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx 12.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: * * * * * B * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: * * * * * * * * * * * * * * * * *

ApproachDel: xxxxxxx 12.7 xxxxxxx xxxxxxx

ApproachLOS: * B * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #23 Eight Mile & S Proj Driveway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 487

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.93

gq2: 0.00 -0.66

gq: 0.00 -3.59

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

f: 0.003

f: 1.000 1.000

vcmax: 0 -40

vcg: 0 136

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1117 1105 529 1086 1086 557 0 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1117 1105 529 1086 1086 557 0 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1117 1105 529 1086 1086 557 0 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 185 211 549 239 216 530 1623 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 185 211 549 239 216 530 1623 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Proposed Project AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

```

*****
Intersection #24 Ham Ln & E Project Driveway
*****
Average Delay (sec/veh):      3.9      Worst Case Level Of Service: A[ 8.7]
*****
Street Name:      Ham Lane      East Project Driveway
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 1 0 0 0      0 0 0 1 0      0 0 1 0 0      0 0 0 0 0
-----|-----|-----|-----|
Volume Module:AM Peak Hour
Base Vol:      0 29 0      0 0 27 0      0 0 0 0      0 0 0 0
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:  0 29 0      0 0 27 0      0 0 0 0      0 0 0 0
Added Vol:   35 0 0      0 0 0 13      5 0 26 0      0 0 0 0
PasserByVol: 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Initial Fut: 35 29 0      0 0 27 13      5 0 26 0      0 0 0 0
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:  38 32 0      0 0 29 14      5 0 28 0      0 0 0 0
Reduct Vol:  0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
FinalVolume: 38 32 0      0 0 29 14      5 0 28 0      0 0 0 0
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:  4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol:   43 xxxxx xxxxx xxxxx xxxxx xxxxx 144 144 36 xxxxx xxxxx xxxxx
Potent Cap.: 1565 xxxxx xxxxx xxxxx xxxxx xxxxx 849 747 1036 xxxxx xxxxx xxxxx
Move Cap.:   1565 xxxxx xxxxx xxxxx xxxxx xxxxx 832 729 1036 xxxxx xxxxx xxxxx
Volume/Cap:  0.02 xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 0.00 0.03 xxxxx xxxxx xxxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:   1.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 7.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Movement:    LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 997 xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 7.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.7 xxxxx xxxxx xxxxx xxxxx
Shared LOS:   A * * * * * * * * * * * * * * * * * * * * * * * * * * * *
ApproachDel: xxxxxx      xxxxxx      8.7      xxxxxx
ApproachLOS:  * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****

```

Existing Plus Proposed Project AM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

```

*****
Intersection #24 Ham Ln & E Project Driveway
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HevVeh:      2%      2%      2%      2%
Grade:        0%      0%      0%      0%
Peds/Hour:    0      0      0      0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:    12 feet      12 feet      12 feet      12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index:      #96
Dist(miles):    0.250
Speed (mph):    1.00
SignalIndex:    #6
Cycle Time:      100 secs
InitVolume:     21 10
Saturation:     1769 245
ArrivalType:    4 4
G/C:            0.07 0.19
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:              0.089 0.252
gq1:            1.08 3.05
gq2:            0.02 0.17
gq:             1.10 3.22
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:          0.550
beta:           0.645
ta (secs):     900.000
F:             0.003
f:             1.000 1.000
vcmax:         6 2
vcg:           6 3
vcmin:         1000 1000
tp:            0.0 0.0
p:             0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:    0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   43 xxxxx xxxxx 0 xxxxx xxxxx 144 144 36 158 151 32
AdjCnflVol:   43 xxxxx xxxxx 0 xxxxx xxxxx 144 144 36 158 151 32
UpstreamAdj:  1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   43 xxxxx xxxxx 0 xxxxx xxxxx 144 144 36 158 151 32
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap:   1565 xxxxx xxxxx 1623 xxxxx xxxxx 849 747 1036 808 741 1042
UpstreamAdj:  1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
Potent Cap.:  1565 xxxxx xxxxx 1623 xxxxx xxxxx 849 747 1036 808 741 1042

```

Existing Plus Proposed Project AM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
#3 [HCM2k95thQ]:	256	170	284	50	362	362	143	630	45	303	363	5
#4 [HCM2k95thQ]:	95	384	452	114	600	86	183	689	689	388	505	505
#5 [HCM2k95thQ]:	32	320	320	251	269	269	321	321	321	320	320	320
#6 [HCM2k95thQ]:	51	51	51	97	97	97	35	64	0	43	62	62
#7 [HCM2k95thQ]:	451	231	231	69	513	513	411	509	490	298	615	615
#8 [HCM2k95thQ]:	101	307	416	351	282	16	221	221	179	230	470	470
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	22.3	22.3	22.3	0.7	0.7	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	3.2	3.2	3.2	0.4	0.4	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	7.5	7.5	7.5	1.3	1.3	xxxx	xxxx	xxxx	xxxx
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#23 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	9.7	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#24 [2Way95thQ]:	1.9	1.9	xxxx	xxxx	xxxx	xxxx	2.6	2.6	2.6	xxxx	xxxx	xxxx

 Existing Plus Proposed Project PM Peak Hour

Scenario Report

Scenario: Exist + Proj PM
 Command: Exist + Proj PM
 Volume: Exist PM Pk Hr
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: PM Pk Hr
 Trip Distribution: Existing
 Paths: Nr-Term Build-out
 Routes: Default Route
 Configuration: Default Configuration

 Existing Plus Proposed Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Gill Med Ctr	36.00	WomenMedCr	KSF 0.31	0.66	11	24	35	9.3
1	Gill Med Ctr	60.00	MedOffBldg	KSF 0.97	2.49	58	149	207	54.9
1	Gill Med Ctr	140.00	Hospital	KSF 0.31	0.66	43	92	135	35.8
Zone 1 Subtotal						112	265	377	100.0
TOTAL						112	265	377	100.0

Existing Plus Proposed Project PM Peak Hour

Trip Distribution Report

Percent Of Trips Existing

Zone	To Gates											
	1	2	3	4	5	6	7	8	9	11	12	
1	0.7	2.9	1.7	1.7	0.4	0.3	2.3	2.2	22.8	0.0	0.0	
Zone	To Gates											
	13	14	15	17	18	19	20	21	22	23	24	
1	3.0	22.3	0.1	17.0	11.0	3.0	0.2	4.1	1.4	0.4	0.3	
Zone	To Gates											
	25											
1	2.2											

Existing Plus Proposed Project PM Peak Hour
-----Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change	
		Del/	V/	Del/	V/	in	
		LOS	Veh	LOS	Veh		
# 3	Eight Mile Rd & Davis Rd	C	25.1	C	26.2	+ 1.146	D/V
# 4	Eight Mile & Lower Sacramento	D	41.5	D	46.3	+ 4.810	D/V
# 5	West Lane & Armstrong Road	C	30.4	C	30.4	+ 0.040	D/V
# 6	West Lane & Ham Lane	A	5.6	A	7.2	+ 1.577	D/V
# 7	West Lane & Eight Mile Road	C	33.1	D	38.6	+ 5.494	D/V
# 8	West Lane & Morada Lane	C	27.7	C	27.8	+ 0.093	D/V
# 9	Eight Mile Road & Ham Lane	C	18.4	E	40.9	+22.488	D/V
# 10	Eight Mile Road & Leach Road	C	17.9	C	19.8	+ 1.913	D/V
# 11	Eight Mile & MickeGrove/Holman	C	23.4	D	27.2	+ 3.762	D/V
# 22	West Lane & W Project Driveway	A	0.0	A	0.0	+ 0.000	D/V
# 23	Eight Mile & S Proj Driveway	A	0.0	C	15.2	+15.207	D/V
# 24	Ham Ln & E Project Driveway	A	0.0	A	8.9	+ 8.915	D/V

Existing Plus Proposed Project PM Peak Hour

Signal Warrant Summary Report		
Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 9 Eight Mile Road & Ham Lane	???	No / No
# 10 Eight Mile Road & Leach Road	???	No / No
# 11 Eight Mile & MickeGrove/Holman	???	No / No
# 22 West Lane & W Project Driveway	???	No / No
# 23 Eight Mile & S Proj Driveway	???	No / No
# 24 Ham Ln & E Project Driveway	???	No / No

Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	90 0 14	6 504 0	0 606 36
ApproachDel:	xxxxxx	40.9	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=104]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1256]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Eight Mile Road & Ham Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	90 0 14	6 504 0	0 606 36
Major Street Volume:	1152			
Minor Approach Volume:	104			
Minor Approach Volume Threshold:	182			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	5 0 5	5 553 0	0 628 5
ApproachDel:	xxxxxx	19.8	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=10]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1201]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Eight Mile Road & Leach Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	5 0 5	5 553 0	0 628 5
Major Street Volume:	1191			
Minor Approach Volume:	10			
Minor Approach Volume Threshold:	173			

SIGNAL WARRANT DISCLAIMER

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	31 0 24	21 591 0	0 615 20
ApproachDel:	xxxxxx	27.2	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.4]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=55]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1302]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 Eight Mile & MickeGrove/Holman

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	31 0 24	21 591 0	0 615 20
Major Street Volume:	1247			
Minor Approach Volume:	55			
Minor Approach Volume Threshold:	161			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 575 73	0 434 0	0 0 0 0	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #22 West Lane & W Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 1
Initial Vol:	0 575 73	0 434 0	0 0 0 0	0 0 0 0
Major Street Volume:	1082			
Minor Approach Volume:	0			
Minor Approach Volume Threshold:	258			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0 0	0 0 172	0 436 0	0 493 17
ApproachDel:	xxxxxx	15.2	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.7]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=172]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1118]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Eight Mile & S Proj Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 0 1 0
Initial Vol:	0 0 0	0 0 172	0 436 0	0 493 17
Major Street Volume:	946			
Minor Approach Volume:	172			
Minor Approach Volume Threshold:	234			

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0
Initial Vol:	17 24 0	0 24 6	14 0 79	0 0 0 0
ApproachDel:	xxxxxx	xxxxxx	8.9	xxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=93]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=164]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Proposed Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 Ham Ln & E Project Driveway

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Initial Vol. Rows include North Bound, South Bound, East Bound, West Bound with various traffic signal details.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Eight Mile Rd & Davis Rd

Summary table with 4 columns: Cycle (sec), Loss Time (sec), Optimal Cycle, Critical Vol./Cap. (X), Average Delay (sec/veh), Level Of Service.

Table with 5 columns: Street Name, Approach, Movement, Control, Rights. Rows include North Bound, South Bound, East Bound, West Bound with signal details.

Volume Module: PM Peak Hour

Table with 12 columns showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 10 columns showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 10 columns showing capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Table with 12 columns for North, South, East, and West bounds, each with L, T, and R lanes. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 12 columns for North, South, East, and West bounds, each with L, T, and R lanes. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Eight Mile & Lower Sacramento

Cycle (sec): 100 Critical Vol./Cap.(X): 0.907
Loss Time (sec): 12 Average Delay (sec/veh): 46.3
Optimal Cycle: 113 Level Of Service: D

Street Name: Lower Sacramento Road Eight Mile Road West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 1 0 1 0 1 0

Volume Module:PM Peak Hour
Base Vol: 26 385 237 64 400 126 107 551 34 240 548 34
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 26 385 237 64 400 126 107 551 34 240 548 34
Added Vol: 0 0 19 2 0 0 0 23 0 45 54 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 26 385 256 66 400 126 107 574 34 285 602 40
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 28 418 278 72 435 137 116 624 37 310 654 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 28 418 278 72 435 137 116 624 37 310 654 43
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 28 418 278 72 435 137 116 624 37 310 654 43

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.97 0.97 0.93 0.97 0.97
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.94 0.06 1.00 0.94 0.06
Final Sat.: 1769 1862 1583 1769 1862 1583 1769 1744 103 1769 1730 115

Capacity Analysis Module:
Vol/Sat: 0.02 0.22 0.18 0.04 0.23 0.09 0.07 0.36 0.36 0.18 0.38 0.38
Crit Moves: ****
Green/Cycle: 0.02 0.25 0.25 0.04 0.27 0.27 0.09 0.39 0.39 0.19 0.50 0.50
Volume/Cap: 0.85 0.91 0.71 0.91 0.85 0.32 0.76 0.91 0.91 0.91 0.76 0.76
Delay/Veh: 146.4 57.9 40.3 118.0 47.5 29.3 63.7 43.6 43.6 66.2 23.7 23.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 146.4 57.9 40.3 118.0 47.5 29.3 63.7 43.6 43.6 66.2 23.7 23.7
LOS by Move: F E D F D C E D D E C C
HCM2k95thQ: 121 704 415 224 667 160 256 938 938 578 692 692

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

HCM Ops Adjusted Lane Utilization Module:
Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 0 1 0 1 0 0 1 0
Lane Group: L T R L T R L RT RT L RT RT
#LnsInGrps: 1 1 1 1 1 1 1 1 1 1 1 1

HCM Ops Input Saturation Adj Module:
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12
CrsswalkWid: 8 8 8 8 8 8 8 8
% Hev Veh: 2 2 2 2 2 2 2 2
Grade: 0% 0% 0% 0%
Parking/Hr: No No No No
Bus Stp/Hr: 0 0 0 0
Area Type: < < < < < < < < < < < < Other > > > > > > > > > > > > >
Cnft Ped/Hr: 0 0 0 0
ExclusivERT: Include Include Include Include
% RT Prtct: 0 0 0 0

HCM Ops f(lt) Adj Case Module:
f(lt) Case: 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx 1 xxxx xxxx

HCM Ops Saturation Adj Module:
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Hev Veh Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Parking Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Bus Stp Adj: xxxx xxxx 1.00 xxxx xxxx 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
RT Adj: xxxx xxxx 0.85 xxxx xxxx 0.85 xxxx 0.99 0.99 xxxx 0.99 0.99
LT Adj: 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx 0.95 xxxx xxxxxx
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
HCM Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.97 0.97 0.93 0.97 0.97
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Fnl Sat Adj: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.97 0.97 0.93 0.97 0.97

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < No > > > > > > > > > > > > >

Signal Type: < < < < < < < < < < < Actuated > > > > > > > > > > > > >

DelAdjPctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Eight Mile & Lower Sacramento

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include Green/Cycle, ArrivalType, ProgFactor, Q1, UpstreamVC, UpstreamAdj, EarlyArrAdj, Q2, HCM2KQueue, 70thFactor, HCM2k70thQ, 85thFactor, HCM2k85thQ, 90thFactor, HCM2k90thQ, 95thFactor, HCM2k95thQ, 98thFactor, HCM2k98thQ.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 West Lane & Armstrong Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.637
Loss Time (sec): 12 Average Delay (sec/veh): 30.4
Optimal Cycle: 52 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include West Lane, South Bound, East Bound, West Bound.

Table with columns: Volume Module: PM Peak Hour, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 West Lane & Ham Lane

Cycle (sec): 100 Critical Vol./Cap.(X): 0.225
Loss Time (sec): 9 Average Delay (sec/veh): 7.2
Optimal Cycle: 23 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Ham Lane, North Bound, South Bound, East Bound, West Lane, West Bound.

Volume Module:PM Peak Hour

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 West Lane & Ham Lane

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns: HCM Ops Adjusted Lane Utilization Module, Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module:

Table with columns: Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExclusivERT, % RT Prtct.

HCM Ops f(lt) Adj Case Module:

Table with columns: f(lt) Case.

HCM Ops Saturation Adj Module:

Table with columns: Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Frl Sat Adj.

Delay Adjustment Factor Module:

Table with columns: Coordinated, Signal Type, DelAdjPctr.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North, South, East, West. Rows include Intersection #6 West Lane & Ham Lane, Cycle Length, Actual Green Time, Effective Green Time, etc.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Intersection #6 West Lane & Ham Lane, Movement, Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 West Lane & Eight Mile Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.843
Loss Time (sec): 12 Average Delay (sec/veh): 38.6
Optimal Cycle: 88 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes for West Lane, South Bound, East Bound, West Bound.

Volume Module: PM Peak Hour. Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module. Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module. Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 West Lane & Eight Mile Road

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for HCM Ops Adjusted Lane Utilization Module: Lanes, Lane Group, #LnsInGrps.

HCM Ops Input Saturation Adj Module. Table with columns for Lane Width, CrsswalkWid, % Hev Veh, Grade, Parking/Hr, Bus Stp/Hr, Area Type, Cnft Ped/Hr, ExlusiveRT, % RT Prtct.

HCM Ops f(lt) Adj Case Module. Table with columns for f(lt) Case.

HCM Ops Saturation Adj Module. Table with columns for Ln Wid Adj, Hev Veh Adj, Grade Adj, Parking Adj, Bus Stp Adj, Area Adj, RT Adj, LT Adj, PedBike Adj, HCM Sat Adj, Usr Sat Adj, MLF Sat Adj, Fnl Sat Adj.

Delay Adjustment Factor Module. Table with columns for Coordinated, Signal Type.

Table with columns for DelAdjPctr.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Table with 13 columns: Approach, North Bound, South Bound, East Bound, West Bound, and various performance metrics like Green/Cycle, ArrivalType, ProgFactor, etc.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table for Intersection #8 West Lane & Morada Lane, including Cycle, Loss Time, Optimal Cycle, Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module, and various performance metrics.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 West Lane & Morada Lane

Table with columns: Approach, Movement, North Bound, South Bound, East Bound, West Bound. Rows include HCM Ops Adjusted Lane Utilization Module, HCM Ops Input Saturation Adj Module, HCM Ops f(lt) Adj Case Module, HCM Ops Saturation Adj Module, and Delay Adjustment Factor Module.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #9 Eight Mile Road & Ham Lane

 Average Delay (sec/veh): 3.4 Worst Case Level Of Service: E[40.9]

 Street Name: Ham Lane Eight Mile Road
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0
 Volume Module: PM Peak Hour
 Base Vol: 0 0 0 11 0 14 6 504 0 0 589 19
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 11 0 14 6 504 0 0 589 19
 Added Vol: 0 0 0 79 0 0 0 0 0 0 0 17 17
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 90 0 14 6 504 0 0 606 36
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 0 0 0 98 0 15 7 548 0 0 659 39
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 0 0 0 98 0 15 7 548 0 0 659 39
 Critical Gap Module:
 Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx
 FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx
 Capacity Module:
 Cnflct Vol: xxxx xxxx xxxxx 1239 1239 678 698 xxxx xxxxx xxxx xxxx xxxxx
 Potent Cap.: xxxx xxxx xxxxx 194 175 452 899 xxxx xxxxx xxxx xxxx xxxxx
 Move Cap.: xxxx xxxx xxxxx 193 174 452 899 xxxx xxxxx xxxx xxxx xxxxx
 Volume/Cap: xxxx xxxx xxxxx 0.51 0.00 0.03 0.01 xxxx xxxxx xxxx xxxx xxxxx
 Level Of Service Module:
 2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.5 xxxx xxxxx xxxx xxxx xxxxx
 Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.0 xxxx xxxxx xxxxx xxxx xxxxx
 LOS by Move: * * * * * * A * * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxx xxxx xxxxx xxxx 209 xxxxx xxxx xxxx xxxxx xxxxx
 SharedQueue:xxxxx xxxx xxxxx xxxxx 2.9 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
 Shrd ConDel:xxxxx xxxx xxxxx xxxxx 40.9 xxxxx 9.0 xxxx xxxxx xxxxx xxxx xxxxx
 Shared LOS: * * * * * E * A * * * * *
 ApproachDel: xxxxxx 40.9 xxxxxx xxxxxx
 ApproachLOS: * E * *
 Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

 Intersection #9 Eight Mile Road & Ham Lane

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 HevVeh: 2% 2% 2% 2%
 Grade: 0% 0% 0% 0%
 Peds/Hour: 0 0 0 0
 Pedestrian Walk Speed: 4.00 feet/sec
 LaneWidth: 12 feet 12 feet 12 feet 12 feet
 Time Period: 0.25 hour
 Upstream Signals:
 Link Index: #113
 Dist(miles): 0.250
 Speed (mph): 1.00
 SignalIndex: #21
 Cycle Time: 100 secs
 InitVolume: 0 436
 Saturation: 0 3538
 ArrivalType: 0 4
 G/C: 0.00 0.91
 *** Computation 1: Time for Queue to Clear at Each Upstream Intersection
 p: 0.000 1.213
 gq1: 0.00 -2.63
 gq2: 0.00 -0.52
 gq: 0.00 -3.14
 *** Computation 2: Time Intersection Blocked Because of Upstream Platoons
 alpha: 0.550
 beta: 0.645
 ta (secs): 900.000
 F: 0.003
 f: 1.000 1.000
 vcmax: 0 -35
 vcg: 0 122
 vcmin: 1000 1000
 tp: 0.0 0.0
 p: 0.000
 *** Computation 3: Platoon Event Periods
 pdom/psub: 0.000/0.000/Unconstrained
 *** Computation 4: Conflicting Flows During Each Unblocked Period
 InitCnflVol:1247 1259 548 1239 1239 678 698 xxxxx xxxxx 0 xxxxx xxxxx
 AdjCnflVol: 1247 1259 548 1239 1239 678 698 xxxxx xxxxx 0 xxxxx xxxxx
 UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
 ConflictVol:1247 1259 548 1239 1239 678 698 xxxxx xxxxx 0 xxxxx xxxxx
 *** Computation 5: Capacity for Subject Movement During Unblocked Period
 InitPotCap: 150 171 536 194 175 452 899 xxxxx xxxxx 1623 xxxxx xxxxx
 UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
 Potent Cap.: 150 171 536 194 175 452 899 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Eight Mile Road & Leach Road

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [19.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module:PM Peak Hour. Rows include Leach Road and Eight Mile Road with various approach and movement details.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume. Rows include Leach Road and Eight Mile Road.

Table for Critical Gap Module with columns for Critical Gp and FollowUpTim. Rows include Leach Road and Eight Mile Road.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include Leach Road and Eight Mile Road.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include Leach Road and Eight Mile Road.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #10 Eight Mile Road & Leach Road

Table with columns for Approach, Movement, North Bound, South Bound, East Bound, and West Bound. Rows include HevVeh, Grade, Peds/Hour, Pedestrian Walk Speed, LaneWidth, and Time Period.

Table for Upstream Signals with columns for Link Index, Dist(miles), Speed (mph), SignalIndex, Cycle Time, InitVolume, Saturation, and ArrivalType. Rows include #113 and #21.

Table for Computation 1: Time for Queue to Clear at Each Upstream Intersection with columns for P, gq1, gq2, and gq. Rows include #113 and #21.

Table for Computation 2: Time Intersection Blocked Because of Upstream Platoons with columns for alpha, beta, ta (secs), F, f, vcmax, vcg, and vcm. Rows include #113 and #21.

Table for Computation 3: Platoon Event Periods with columns for pdom/psub, tp, and p. Rows include #113 and #21.

Table for Computation 4: Conflicting Flows During Each Unblocked Period with columns for InitCnflVol, AdjCnflVol, UpstreamAdj, and ConflictVol. Rows include #113 and #21.

Table for Computation 5: Capacity for Subject Movement During Unblocked Period with columns for InitPotCap, UpstreamAdj, and Potent Cap. Rows include #113 and #21.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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*****
Intersection #11 Eight Mile & MickeGrove/Holman
*****
Average Delay (sec/veh):      1.3      Worst Case Level Of Service: D[ 27.2]
*****
Street Name:  Micke Grove Road/Holman Road      Eight Mile Road
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:       Stop Sign      Stop Sign      Uncontrolled      Uncontrolled
Rights:        Include      Include      Include      Include
Lanes:         0 0 0 0 0      0 0 1 0 0 0      0 1 0 0 0      0 0 0 1 0
-----|-----|-----|-----|
Volume Module:PM Peak Hour
Base Vol:      0 0 0 0 31 0 22      16 517 0 0 584 20
Growth Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   0 0 0 0 31 0 22      16 517 0 0 584 20
Added Vol:    0 0 0 0 0 0 2 5 74 0 0 31 0
PasserByVol:  0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:  0 0 0 0 31 0 24      21 591 0 0 615 20
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:   0 0 0 0 34 0 26      23 642 0 0 668 22
Reduct Vol:   0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume:  0 0 0 0 34 0 26      23 642 0 0 668 22
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxxx xxxxx xxxx xxxxxx
FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx
-----|-----|-----|-----|
Capacity Module:
Conflict Vol:  xxxx xxxx xxxxxx 1367 1367 679 690 xxxx xxxxxx xxxx xxxx xxxxxx
Potent Cap.:  xxxx xxxx xxxxxx 162 147 451 904 xxxx xxxxxx xxxx xxxx xxxxxx
Move Cap.:    xxxx xxxx xxxxxx 159 143 451 904 xxxx xxxxxx xxxx xxxx xxxxxx
Volume/Cap:   xxxx xxxx xxxxx 0.21 0.00 0.06 0.03 xxxx xxxx xxxxx xxxx xxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:    xxxx xxxx xxxxxx xxxx xxxx xxxxxx 1.9 xxxx xxxxxx xxxx xxxx xxxxxx
Control Del:  xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 9.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move:  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Movement:     LT - LTR - RT  LT - LTR - RT  LT - LTR - RT  LT - LTR - RT
Shared Cap.:  xxxxx xxxx xxxxxx xxxxx 221 xxxxxx xxxxx xxxx xxxxxx xxxxxx xxxxxx
SharedQueue:  xxxxx xxxx xxxxxx xxxxxx 1.1 xxxxxx 0.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd ConDel:  xxxxxx xxxxx xxxxxx xxxxxx 27.2 xxxxxx 9.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS:   * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
ApproachDel:  xxxxxx 27.2 xxxxxx xxxxxx
ApproachLOS:  * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****

```

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

```

*****
Intersection #11 Eight Mile & MickeGrove/Holman
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
HevVeh:        2%          2%          2%          2%
Grade:         0%          0%          0%          0%
Peds/Hour:     0          0          0          0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:     12 feet      12 feet      12 feet      12 feet
Time Period: 0.25 hour

```

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 West Lane & W Project Driveway

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Table with columns for Street Name, West Lane, and West Project Driveway. Rows include Approach, Movement, Control, Rights, and Lanes.

Table for Volume Module: PM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module. Rows include Critical Gp and FollowUpTim.

Table for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #22 West Lane & W Project Driveway

Table with columns for Approach, North Bound, South Bound, East Bound, and West Bound. Rows include Movement, HevVeh, Grade, Peds/Hour, Pedestrian Walk Speed, LaneWidth, and Time Period.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Eight Mile & S Proj Driveway

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: C [15.2]

Street Name: South Project Driveway Eight Mile Road

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:PM Peak Hour

Base Vol: 0 0 0 0 0 0 0 436 0 0 493 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 0 0 436 0 0 493 0

Added Vol: 0 0 0 0 0 0 172 0 0 0 0 0 17

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 0 0 0 172 0 436 0 493 17

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 0 0 0 0 0 0 187 0 474 0 0 536 18

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 0 0 0 187 0 474 0 0 536 18

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 545 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 538 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 538 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.35 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 38.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx 15.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: * * * * * C * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: *

ApproachDel: xxxxxxx 15.2 xxxxxxx xxxxxxx

ApproachLOS: * C * *

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #23 Eight Mile & S Proj Driveway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #113

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #21

Cycle Time: 100 secs

InitVolume: 0 436

Saturation: 0 3538

ArrivalType: 0 4

G/C: 0.00 0.91

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

p: 0.000 1.213

gq1: 0.00 -2.63

gq2: 0.00 -0.52

gq: 0.00 -3.14

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 0 -35

vcg: 0 122

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdom/psub: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:1113 1028 474 1019 1019 545 0 xxxxx xxxxx 0 xxxxx xxxxx

AdjCnflVol: 1113 1028 474 1019 1019 545 0 xxxxx xxxxx 0 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

ConflictVol:1113 1028 474 1019 1019 545 0 xxxxx xxxxx 0 xxxxx xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 186 234 590 263 237 538 1623 xxxxx xxxxx 1623 xxxxx xxxxx

UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx

Potent Cap.: 186 234 590 263 237 538 1623 xxxxx xxxxx 1623 xxxxx xxxxx

Existing Plus Proposed Project PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #24 Ham Ln & E Project Driveway

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A[8.9]

Street Name: Ham Lane East Project Driveway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Include Include Include Include

Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0

-----|-----|-----|-----|

Volume Module:PM Peak Hour

Base Vol: 0 24 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 24 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0

Added Vol: 17 0 0 0 0 0 6 14 0 79 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 17 24 0 0 0 24 6 14 0 79 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 18 26 0 0 0 26 7 15 0 86 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 18 26 0 0 0 26 7 15 0 86 0 0 0 0 0 0 0

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp: 4.1 xxx xxxxxx xxxxxx xxx xxxxxx 6.4 6.5 6.2 xxxxxx xxx xxxxxx

FollowUpTim: 2.2 xxx xxxxxx xxxxxx xxx xxxxxx 3.5 4.0 3.3 xxxxxx xxx xxxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: 33 xxx xxxxxx xxx xxx xxxxxx 92 92 29 xxx xxx xxxxxx

Potent Cap.: 1579 xxx xxxxxx xxx xxx xxxxxx 908 798 1045 xxx xxx xxxxxx

Move Cap.: 1579 xxx xxxxxx xxx xxx xxxxxx 899 788 1045 xxx xxx xxxxxx

Volume/Cap: 0.01 xxx xxxxxx xxx xxx xxxxxx 0.02 0.00 0.08 xxx xxx xxxxxx

-----|-----|-----|-----|

Level Of Service Module:

2Way95thQ: 0.9 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx

Control Del: 7.3 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx

LOS by Move: A *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxx xxx xxxxxx xxx xxx xxxxxx xxx 1020 xxx xxx xxxxxx

SharedQueue: 0.0 xxx xxxxxx xxx xxx xxxxxx xxx 0.3 xxx xxx xxx xxxxxx

Shrd ConDel: 7.3 xxx xxxxxx xxx xxx xxxxxx xxx 8.9 xxx xxx xxx xxxxxx

Shared LOS: A *

ApproachDel: xxxxxx xxxxxx 8.9 xxxxxx

ApproachLOS: * * A *

Note: Queue reported is the distance per lane in feet.

Existing Plus Proposed Project PM Peak Hour

Level Of Service Detailed Computation Report

2000 HCM Unsignalized Method

Future Volume Alternative

Intersection #24 Ham Ln & E Project Driveway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

HevVeh: 2% 2% 2% 2%

Grade: 0% 0% 0% 0%

Peds/Hour: 0 0 0 0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth: 12 feet 12 feet 12 feet 12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index: #96

Dist(miles): 0.250

Speed (mph): 1.00

SignalIndex: #6

Cycle Time: 100 secs

InitVolume: 15 4

Saturation: 1769 362

ArrivalType: 4 4

G/C: 0.04 0.10

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P: 0.055 0.130

gq1: 0.80 0.96

gq2: 0.01 0.01

gq: 0.81 0.98

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha: 0.550

beta: 0.645

ta (secs): 900.000

F: 0.003

f: 1.000 1.000

vcmax: 4 1

vcg: 5 1

vcmin: 1000 1000

tp: 0.0 0.0

p: 0.000

*** Computation 3: Platoon Event Periods

pdcm/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol: 33 xxx xxxxxx 0 xxx xxxxxx 92 92 29 135 96 26

AdjCnflVol: 33 xxx xxxxxx 0 xxx xxxxxx 92 92 29 135 96 26

UpstreamAdj: 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000

ConflictVol: 33 xxx xxxxxx 0 xxx xxxxxx 92 92 29 135 96 26

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap: 1579 xxx xxxxxx 1623 xxx xxxxxx 908 798 1045 836 794 1050

UpstreamAdj: 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000

Potent Cap.: 1579 xxx xxxxxx 1623 xxx xxxxxx 908 798 1045 836 794 1050

Existing Plus Proposed Project PM Peak Hour

Future Queue Length Report (feet)

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
#3 [HCM2k95thQ]:	181	151	181	54	341	341	145	625	59	298	445	2
#4 [HCM2k95thQ]:	121	704	415	224	667	160	256	938	938	578	692	692
#5 [HCM2k95thQ]:	25	426	426	214	251	251	205	205	205	484	484	484
#6 [HCM2k95thQ]:	0	62	62	32	32	32	57	15	15	37	33	33
#7 [HCM2k95thQ]:	519	306	306	52	453	453	423	401	373	229	783	783
#8 [HCM2k95thQ]:	70	393	391	254	236	6	112	112	117	259	406	406
#9 [2Way95thQ]:	xxxx	xxxx	xxxx	71.5	71.5	71.5	0.5	0.5	xxxx	xxxx	xxxx	xxxx
#10 [2Way95thQ]:	xxxx	xxxx	xxxx	3.3	3.3	3.3	0.5	0.5	xxxx	xxxx	xxxx	xxxx
#11 [2Way95thQ]:	xxxx	xxxx	xxxx	26.4	26.4	26.4	1.9	1.9	xxxx	xxxx	xxxx	xxxx
#22 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#23 [2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	38.6	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#24 [2Way95thQ]:	0.9	0.9	xxxx	xxxx	xxxx	xxxx	8.2	8.2	8.2	xxxx	xxxx	xxxx

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 SB		
Agency or Company		KD Anderson & Associates			Junction		60 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		Cumulative No Project		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N				4		Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N				1		<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D				650		L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F				4994		V _D = veh/h	
		Ramp Volume, V _R				345			
		Freeway Free-Flow Speed, S _{FF}				65.0			
		Ramp Free-Flow Speed, S _{FR}				35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4994	0.92	Level	10	0	0.952	1.00	5700	
Ramp	345	0.92	Level	10	0	0.952	1.00	394	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2707 pc/h V ₃ or V _{av34} 1496 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	5700	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	5306	Exhibit 13-8	9400	No
					V _R	394	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2707	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 21.7 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.463 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.3 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.4 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.3 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	61 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative No Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		4		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off			L _{down} = ft	
	Ramp Number of Lanes, N		1						
Acceleration Lane Length, L _A		360		Freeway Volume, V _F		4994		L _{up} = ft	
Deceleration Lane Length L _D				Ramp Volume, V _R		645		V _D = veh/h	
Freeway Free-Flow Speed, S _{FF}		65.0		Freeway Free-Flow Speed, S _{FF}		65.0			
Ramp Free-Flow Speed, S _{FR}		35.0		Ramp Free-Flow Speed, S _{FR}		35.0			
V _u = veh/h									
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4994	0.92	Level	10	0	0.952	1.00	5700	
Ramp	645	0.92	Level	10	0	0.952	1.00	736	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.126 using Equation (Exhibit 13-6) V ₁₂ = 717 pc/h V ₃ or V _{av34} = 2491 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2280 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	6436	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	3016	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 26.4 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.375 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.4 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	60.6 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.6 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	62 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative No Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		4		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off			L _{down} = ft	
	Ramp Number of Lanes, N		1						
Acceleration Lane Length, L _A		360		Freeway Volume, V _F		3975		L _{up} = ft	
Deceleration Lane Length L _D				Ramp Volume, V _R		448		V _D = veh/h	
Freeway Free-Flow Speed, S _{FF}		65.0		Freeway Free-Flow Speed, S _{FF}		65.0			
Ramp Free-Flow Speed, S _{FR}		35.0		Ramp Free-Flow Speed, S _{FR}		35.0			
V _u = veh/h									
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3975	0.92	Level	10	0	0.952	1.00	4537	
Ramp	448	0.92	Level	10	0	0.952	1.00	511	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.154 using Equation (Exhibit 13-6) V ₁₂ = 698 pc/h V ₃ or V _{av34} = 1919 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 1814 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	5048	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2325	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 21.1 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.336 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.3 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.9 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	59.7 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	63 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative No Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			4			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			625			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3975			V _D = veh/h	
		Ramp Volume, V _R			333				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3975	0.92	Level	10	0	0.952	1.00	4537	
Ramp	333	0.92	Level	10	0	0.952	1.00	380	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = 0.436 using Equation (Exhibit 13-7) P _{FD} = V ₁₂ = 2192 pc/h V ₃ or V _{av34} 1172 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4537	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	4157	Exhibit 13-8	9400	No
					V _R	380	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2192	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 17.5 (pc/mi/ln) LOS = B (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.462 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.4 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.6 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 SB		
Agency or Company		KD Anderson & Associates			Junction		60 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		PM Peak Hour			Analysis Year		Cumulative No Project		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N				4		Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N				1		<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D				650		L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F				4147		V _D = veh/h	
		Ramp Volume, V _R				406			
		Freeway Free-Flow Speed, S _{FF}				65.0			
		Ramp Free-Flow Speed, S _{FR}				35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4147	0.92	Level	10	0	0.952	1.00	4733	
Ramp	406	0.92	Level	10	0	0.952	1.00	463	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2325 pc/h V ₃ or V _{av34} 1204 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4733	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	4270	Exhibit 13-8	9400	No
					V _R	463	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2325	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 18.4 (pc/mi/ln) LOS = B (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.470 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.2 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.5 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.4 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information				Site Information					
Analyst	Shijo	Freeway/Dir of Travel	SR 99 SB						
Agency or Company	KD Anderson & Associates	Junction	61 Eight Mile On-Ramp						
Date Performed	August 2020	Jurisdiction	Stockton						
Analysis Time Period	PM Peak Hour	Analysis Year	Cumulative No Project						
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N	4	Downstream Adj Ramp						
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N	1	<input type="checkbox"/> Yes <input type="checkbox"/> On						
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A	360	<input checked="" type="checkbox"/> No <input type="checkbox"/> Off						
L _{up} = ft	Deceleration Lane Length L _D		L _{down} = ft						
V _u = veh/h	Freeway Volume, V _F	4147	V _D = veh/h						
	Ramp Volume, V _R	409							
	Freeway Free-Flow Speed, S _{FF}	65.0							
	Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4147	0.92	Level	10	0	0.952	1.00	4733	
Ramp	409	0.92	Level	10	0	0.952	1.00	467	
UpStream									
DownStream									
Merge Areas				Diverge Areas					
Estimation of v ₁₂				Estimation of v ₁₂					
L _{EQ} =	V ₁₂ = V _F (P _{FM}) (Equation 13-6 or 13-7)			L _{EQ} =	V ₁₂ = V _R + (V _F - V _R)P _{FD} (Equation 13-12 or 13-13)				
P _{FM} =	0.159 using Equation (Exhibit 13-6)			P _{FD} =	using Equation (Exhibit 13-7)				
V ₁₂ =	755 pc/h			V ₁₂ =	pc/h				
V ₃ or V _{av34}	1989 pc/h (Equation 13-14 or 13-17)			V ₃ or V _{av34}	pc/h (Equation 13-14 or 13-17)				
Is V ₃ or V _{av34} > 2,700 pc/h?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Is V ₃ or V _{av34} > 2,700 pc/h?	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2	<input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} =	pc/h (Equation 13-16, 13-18, or 13-19)			If Yes, V _{12a} =	pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks				Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	5200	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area				Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	1222	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)				Level of Service Determination (if not F)					
D _R = 5.475 + 0.00734 v _R + 0.0078 V ₁₂ - 0.00627 L _A				D _R = 4.252 + 0.0086 V ₁₂ - 0.009 L _D					
D _R =	12.5 (pc/mi/ln)			D _R =	(pc/mi/ln)				
LOS =	B (Exhibit 13-2)			LOS =	(Exhibit 13-2)				
Speed Determination				Speed Determination					
M _S =	0.309 (Exhibit 13-11)			D _S =	(Exhibit 13-12)				
S _R =	57.9 mph (Exhibit 13-11)			S _R =	mph (Exhibit 13-12)				
S ₀ =	59.6 mph (Exhibit 13-11)			S ₀ =	mph (Exhibit 13-12)				
S =	59.2 mph (Exhibit 13-13)			S =	mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	62 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Cumulative No Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		4		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		360		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		5180		V _D = veh/h				
	Ramp Volume, V _R		294						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	5180	0.92	Level	10	0	0.952	1.00	5912	
Ramp	294	0.92	Level	10	0	0.952	1.00	336	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.176 using Equation (Exhibit 13-6) V ₁₂ = 1039 pc/h V ₃ or V _{av34} = 2436 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2364 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	6248	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2700	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 24.1 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.354 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.9 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	60.4 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.8 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 NB		
Agency or Company		KD Anderson & Associates			Junction		63 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		PM Peak Hour			Analysis Year		Cumulative No Project		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N				4		Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N				1		<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D				625		L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F				5180		V _D = veh/h	
		Ramp Volume, V _R				546			
		Freeway Free-Flow Speed, S _{FF}				65.0			
		Ramp Free-Flow Speed, S _{FR}				35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	5180	0.92	Level	10	0	0.952	1.00	5912	
Ramp	546	0.92	Level	10	0	0.952	1.00	623	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2929 pc/h V ₃ or V _{av34} 1491 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	5912	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	5289	Exhibit 13-8	9400	No
					V _R	623	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2929	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 23.8 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.484 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 53.9 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.4 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 60.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	60 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			4			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			650			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			4994			V _D = veh/h	
		Ramp Volume, V _R			352				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4994	0.92	Level	10	0	0.952	1.00	5700	
Ramp	352	0.92	Level	10	0	0.952	1.00	402	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2712 pc/h V ₃ or V _{av34} 1494 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	5700	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	5298	Exhibit 13-8	9400	No
					V _R	402	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2712	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 21.7 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.464 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.3 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.4 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.3 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	61 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		4		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		360		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		4994		V _D = veh/h				
	Ramp Volume, V _R		667						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4994	0.92	Level	10	0	0.952	1.00	5700	
Ramp	667	0.92	Level	10	0	0.952	1.00	761	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
L _{EQ} =	V ₁₂ = V _F (P _{FM}) (Equation 13-6 or 13-7)				L _{EQ} =	V ₁₂ = V _R + (V _F - V _R)P _{FD} (Equation 13-12 or 13-13)			
P _{FM} =	0.123 using Equation (Exhibit 13-6)				P _{FD} =	using Equation (Exhibit 13-7)			
V ₁₂ =	699 pc/h				V ₁₂ =	pc/h			
V ₃ or V _{av34}	2500 pc/h (Equation 13-14 or 13-17)				V ₃ or V _{av34}	pc/h (Equation 13-14 or 13-17)			
Is V ₃ or V _{av34} > 2,700 pc/h?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Is V ₃ or V _{av34} > 2,700 pc/h?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2	<input type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, V _{12a} =	2280 pc/h (Equation 13-16, 13-18, or 13-19)				If Yes, V _{12a} =	pc/h (Equation 13-16, 13-18, or 13-19)			
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	6461	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	3041	Exhibit 13-8		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
D _R = 5.475 + 0.00734 v _R + 0.0078 V ₁₂ - 0.00627 L _A					D _R = 4.252 + 0.0086 V ₁₂ - 0.009 L _D				
D _R = 26.6 (pc/mi/ln)					D _R = (pc/mi/ln)				
LOS = C (Exhibit 13-2)					LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.377 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 56.3 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 60.6 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.5 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	62 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		4		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		360		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		3975		V _D = veh/h				
	Ramp Volume, V _R		450						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3975	0.92	Level	10	0	0.952	1.00	4537	
Ramp	450	0.92	Level	10	0	0.952	1.00	514	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.154 using Equation (Exhibit 13-6) V ₁₂ = 697 pc/h V ₃ or V _{av34} = 1920 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 1814 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	5051	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2328	Exhibit 13-8		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 21.1 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.336 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.3 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.9 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	59.7 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	63 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			4			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			625			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3975			V _D = veh/h	
		Ramp Volume, V _R			395				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3975	0.92	Level	10	0	0.952	1.00	4537	
Ramp	395	0.92	Level	10	0	0.952	1.00	451	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2232 pc/h V ₃ or V _{av34} 1152 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4537	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	4086	Exhibit 13-8	9400	No
					V _R	451	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2232	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 17.8 (pc/mi/ln) LOS = B (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.469 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.2 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.7 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.5 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	60 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			4			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			650			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			4147			V _D = veh/h	
		Ramp Volume, V _R			409				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4147	0.92	Level	10	0	0.952	1.00	4733	
Ramp	409	0.92	Level	10	0	0.952	1.00	467	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2327 pc/h V ₃ or V _{av34} 1203 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4733	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	4266	Exhibit 13-8	9400	No
					V _R	467	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2327	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 18.4 (pc/mi/ln) LOS = B (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.470 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.2 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.5 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 61.4 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	61 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		4		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		360		Freeway Volume, V _F		4147		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		478		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4147	0.92	Level	10	0	0.952	1.00	4733	
Ramp	478	0.92	Level	10	0	0.952	1.00	546	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.150 using Equation (Exhibit 13-6) V ₁₂ = 708 pc/h V ₃ or V _{av34} = 2012 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 1893 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	5279	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2439	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 22.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.341 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 57.2 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 61.7 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 59.5 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo	Freeway/Dir of Travel	SR 99 NB						
Agency or Company	KD Anderson & Associates	Junction	62 Eight Mile On-Ramp						
Date Performed	August 2020	Jurisdiction	Stockton						
Analysis Time Period	PM Peak Hour	Analysis Year	Cumulative Plus Project						
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		4		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		360		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		5180		V _D = veh/h				
	Ramp Volume, V _R		301						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	5180	0.92	Level	10	0	0.952	1.00	5912	
Ramp	301	0.92	Level	10	0	0.952	1.00	344	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.175 using Equation (Exhibit 13-6) V ₁₂ = 1033 pc/h V ₃ or V _{av34} = 2439 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2364 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	6256	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2708	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 24.2 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.354 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.9 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	60.4 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.8 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	63 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Cumulative Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			4			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			625			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			5180			V _D = veh/h	
		Ramp Volume, V _R			575				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	5180	0.92	Level	10	0	0.952	1.00	5912	
Ramp	575	0.92	Level	10	0	0.952	1.00	656	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.436 using Equation (Exhibit 13-7) V ₁₂ = 2948 pc/h V ₃ or V _{av34} 1482 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	5912	Exhibit 13-8	9400	No
					V _{FO} = V _F - V _R	5256	Exhibit 13-8	9400	No
					V _R	656	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2948	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 24.0 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.487 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 53.8 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.4 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 60.6 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 SB		
Agency or Company		KD Anderson & Associates			Junction		50 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		EPAP No Project		
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3888			V _D = veh/h	
		Ramp Volume, V _R			311				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3888	0.92	Level	10	0	0.952	1.00	4437	
Ramp	311	0.92	Level	10	0	0.952	1.00	355	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.633 using Equation (Exhibit 13-7) V ₁₂ = 2938 pc/h V ₃ or V _{av34} 1499 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4437	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4082	Exhibit 13-8	7050	No
					V _R	355	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2938	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 27.3 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.460 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.4 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.4 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information				Site Information					
Analyst	Shijo	Freeway/Dir of Travel	SR 99 SB						
Agency or Company	KD Anderson & Associates	Junction	51 Eight Mile On-Ramp						
Date Performed	August 2020	Jurisdiction	Stockton						
Analysis Time Period	AM Peak Hour	Analysis Year	EPAP No Project						
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		3	Downstream Adj Ramp					
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1	<input type="checkbox"/> Yes <input type="checkbox"/> On					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		340	<input checked="" type="checkbox"/> No <input type="checkbox"/> Off					
L _{up} = ft	Deceleration Lane Length L _D			L _{down} = ft					
V _u = veh/h	Freeway Volume, V _F		3888	V _D = veh/h					
	Ramp Volume, V _R		471						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3888	0.92	Level	10	0	0.952	1.00	4437	
Ramp	471	0.92	Level	10	0	0.952	1.00	538	
UpStream									
DownStream									
Merge Areas				Diverge Areas					
Estimation of v ₁₂				Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)				$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)					
L _{EQ} =	0.587 using Equation (Exhibit 13-6)			L _{EQ} =	using Equation (Exhibit 13-7)				
P _{FM} =	2605 pc/h			P _{FD} =	pc/h				
V ₁₂ =	1832 pc/h (Equation 13-14 or 13-17)			V ₁₂ =	pc/h (Equation 13-14 or 13-17)				
V ₃ or V _{av34}	Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			V ₃ or V _{av34}	Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No				
	Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} =	2605 pc/h (Equation 13-16, 13-18, or 13-19)			If Yes, V _{12a} =	pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks				Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4975	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area				Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	3143	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)				Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$				$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$					
D _R =	27.6 (pc/mi/ln)			D _R =	(pc/mi/ln)				
LOS =	C (Exhibit 13-2)			LOS =	(Exhibit 13-2)				
Speed Determination				Speed Determination					
M _S =	0.388 (Exhibit 13-11)			D _S =	(Exhibit 13-12)				
S _R =	56.1 mph (Exhibit 13-11)			S _R =	mph (Exhibit 13-12)				
S ₀ =	60.2 mph (Exhibit 13-11)			S ₀ =	mph (Exhibit 13-12)				
S =	57.5 mph (Exhibit 13-13)			S =	mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		300		Freeway Volume, V _F		3140		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		385		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3140	0.92	Level	10	0	0.952	1.00	3584	
Ramp	385	0.92	Level	10	0	0.952	1.00	439	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 2100 pc/h V ₃ or V _{av34} = 1484 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2100 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4023	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2539	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 23.2 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.349 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.0 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.5 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.5 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 NB		
Agency or Company		KD Anderson & Associates			Junction		53 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		EPAP No Project		
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3140			V _D = veh/h	
		Ramp Volume, V _R			204				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3140	0.92	Level	10	0	0.952	1.00	3584	
Ramp	204	0.92	Level	10	0	0.952	1.00	233	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.660 using Equation (Exhibit 13-7) V ₁₂ = 2444 pc/h V ₃ or V _{av34} 1140 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3584	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3351	Exhibit 13-8	7050	No
					V _R	233	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2444	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 22.6 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.449 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.7 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.9 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 SB		
Agency or Company		KD Anderson & Associates			Junction		50 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		PM Peak Hour			Analysis Year		EPAP No Project		
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3		Downstream Adj Ramp		
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1		<input type="checkbox"/> Yes <input type="checkbox"/> On		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A					<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		
L _{up} = ft		Deceleration Lane Length L _D			250		L _{down} = ft		
V _u = veh/h		Freeway Volume, V _F			3229		V _D = veh/h		
		Ramp Volume, V _R			361				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3229	0.92	Level	10	0	0.952	1.00	3685	
Ramp	361	0.92	Level	10	0	0.952	1.00	412	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.649 using Equation (Exhibit 13-7) V ₁₂ = 2536 pc/h V ₃ or V _{av34} 1149 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3685	Exhibit 13-8	7050	No
			V _{FO} = V _F - V _R	3273	Exhibit 13-8	7050	No		
			V _R	412	Exhibit 13-10	2000	No		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2536	Exhibit 13-8 4400:All		No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 23.8 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.465 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.3 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.7 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.5 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		340		Freeway Volume, V _F		3229		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		389		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3229	0.92	Level	10	0	0.952	1.00	3685	
Ramp	389	0.92	Level	10	0	0.952	1.00	444	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)				
L _{EQ} =					L _{EQ} =				
P _{FM} = 0.587 using Equation (Exhibit 13-6)					P _{FD} = using Equation (Exhibit 13-7)				
V ₁₂ = 2163 pc/h					V ₁₂ = pc/h				
V ₃ or V _{av34} = 1522 pc/h (Equation 13-14 or 13-17)					V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17)				
Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} = 2163 pc/h (Equation 13-16, 13-18, or 13-19)					If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4129	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2607	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 23.5 (pc/mi/ln)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln)				
LOS = C (Exhibit 13-2)					LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.350 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 56.9 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 61.3 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.5 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{up} = ft V _u = veh/h	Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{down} = ft V _D = veh/h	Ramp Number of Lanes, N	1			
	Acceleration Lane Length, L _A	300							
	Deceleration Lane Length L _D								
	Freeway Volume, V _F	4092							
	Ramp Volume, V _R	249							
	Freeway Free-Flow Speed, S _{FF}	65.0							
	Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4092	0.92	Level	10	0	0.952	1.00	4670	
Ramp	249	0.92	Level	10	0	0.952	1.00	284	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 2736 pc/h V ₃ or V _{av34} = 1934 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2736 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4954	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	3020	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 27.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.380 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 56.3 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 59.8 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 57.6 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	53 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			4092			V _D = veh/h	
		Ramp Volume, V _R			446				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4092	0.92	Level	10	0	0.952	1.00	4670	
Ramp	446	0.92	Level	10	0	0.952	1.00	509	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.620 using Equation (Exhibit 13-7) V ₁₂ = 3088 pc/h V ₃ or V _{av34} 1582 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4670	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4161	Exhibit 13-8	7050	No
					V _R	509	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	3088	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 28.1 (pc/mi/ln) LOS = D (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.474 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.1 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.0 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.4 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3888			V _D = veh/h	
		Ramp Volume, V _R			311				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3888	0.92	Level	10	0	0.952	1.00	4437	
Ramp	311	0.92	Level	10	0	0.952	1.00	355	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.633 using Equation (Exhibit 13-7) V ₁₂ = 2938 pc/h V ₃ or V _{av34} 1499 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4437	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4082	Exhibit 13-8	7050	No
					V _R	355	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2938	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 27.3 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11) S _R = mph (Exhibit 13-11) S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					D _S = 0.460 (Exhibit 13-12) S _R = 54.4 mph (Exhibit 13-12) S ₀ = 69.4 mph (Exhibit 13-12) S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET											
General Information					Site Information						
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB							
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp							
Date Performed	August 2020		Jurisdiction	Stockton							
Analysis Time Period	AM Peak Hour		Analysis Year	EPAP No Project							
Project Description Gill Women's Meidcal Center											
Inputs											
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{up} = ft V _u = veh/h	Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{down} = ft V _D = veh/h	Ramp Number of Lanes, N	1		Acceleration Lane Length, L _A	340		
	Deceleration Lane Length L _D				Freeway Volume, V _F	3888		Ramp Volume, V _R	471		
	Freeway Free-Flow Speed, S _{FF}	65.0			Freeway Free-Flow Speed, S _{FF}	65.0		Ramp Free-Flow Speed, S _{FR}	35.0		
	Ramp Free-Flow Speed, S _{FR}	35.0									
Conversion to pc/h Under Base Conditions											
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p			
Freeway	3888	0.92	Level	10	0	0.952	1.00	4437			
Ramp	471	0.92	Level	10	0	0.952	1.00	538			
UpStream											
DownStream											
Merge Areas					Diverge Areas						
Estimation of v ₁₂					Estimation of v ₁₂						
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2605 pc/h V ₃ or V _{av34} = 1832 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2605 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)						
Capacity Checks					Capacity Checks						
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?		
V _{FO}	4975	Exhibit 13-8		No	V _F		Exhibit 13-8				
					V _{FO} = V _F - V _R		Exhibit 13-8				
					V _R		Exhibit 13-10				
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area						
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?		
V _{R12}	3143	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8				
Level of Service Determination (if not F)					Level of Service Determination (if not F)						
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 27.6 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)						
Speed Determination					Speed Determination						
M _S =	0.388 (Exhibit 13-11)				D _S =	(Exhibit 13-12)					
S _R =	56.1 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)					
S ₀ =	60.2 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)					
S =	57.5 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)					

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		300		Freeway Volume, V _F		3140		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		385		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3140	0.92	Level	10	0	0.952	1.00	3584	
Ramp	385	0.92	Level	10	0	0.952	1.00	439	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 2100 pc/h V ₃ or V _{av34} = 1484 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2100 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4023	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2539	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 23.2 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.349 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.0 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.5 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.5 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 NB		
Agency or Company		KD Anderson & Associates			Junction		53 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		EPAP No Project		
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3140			V _D = veh/h	
		Ramp Volume, V _R			204				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3140	0.92	Level	10	0	0.952	1.00	3584	
Ramp	204	0.92	Level	10	0	0.952	1.00	233	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = 0.660 using Equation (Exhibit 13-7) P _{FD} = V ₁₂ = 2444 pc/h V ₃ or V _{av34} 1140 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3584	Exhibit 13-8	7050	No
			V _{FO} = V _F - V _R	3351	Exhibit 13-8	7050	No		
			V _R	233	Exhibit 13-10	2000	No		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2444	Exhibit 13-8 4400:All		No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 22.6 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.449 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.7 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.9 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N		3		Downstream Adj Ramp			
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On			
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A				<input checked="" type="checkbox"/> No <input type="checkbox"/> Off			
L _{up} = ft		Deceleration Lane Length L _D		250		L _{down} = ft			
V _u = veh/h		Freeway Volume, V _F		3229		V _D = veh/h			
		Ramp Volume, V _R		361					
		Freeway Free-Flow Speed, S _{FF}		65.0					
		Ramp Free-Flow Speed, S _{FR}		35.0					
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3229	0.92	Level	10	0	0.952	1.00	3685	
Ramp	361	0.92	Level	10	0	0.952	1.00	412	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = using Equation (Exhibit 13-6) V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.649 using Equation (Exhibit 13-7) V ₁₂ = 2536 pc/h V ₃ or V _{av34} 1149 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3685	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3273	Exhibit 13-8	7050	No
					V _R	412	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2536	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 23.8 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.465 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.3 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 70.7 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.5 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{up} = ft V _u = veh/h	Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{down} = ft V _D = veh/h	Ramp Number of Lanes, N	1			
	Acceleration Lane Length, L _A	340							
	Deceleration Lane Length L _D								
	Freeway Volume, V _F	3229							
	Ramp Volume, V _R	389							
	Freeway Free-Flow Speed, S _{FF}	65.0							
	Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3229	0.92	Level	10	0	0.952	1.00	3685	
Ramp	389	0.92	Level	10	0	0.952	1.00	444	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2163 pc/h V ₃ or V _{av34} = 1522 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2163 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4129	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2607	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 23.5 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.350 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.9 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.3 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.5 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{up} = ft V _u = veh/h	Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{down} = ft V _D = veh/h	Ramp Number of Lanes, N	1			
	Acceleration Lane Length, L _A	300							
	Deceleration Lane Length L _D								
	Freeway Volume, V _F	4092							
	Ramp Volume, V _R	249							
	Freeway Free-Flow Speed, S _{FF}	65.0							
	Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4092	0.92	Level	10	0	0.952	1.00	4670	
Ramp	249	0.92	Level	10	0	0.952	1.00	284	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 2736 pc/h V ₃ or V _{av34} = 1934 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2736 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4954	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	3020	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 27.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.380 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.3 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	59.8 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	57.6 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	53 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	EPAP No Project					
Project Description Gill Women's Meidcal Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			4092			V _D = veh/h	
		Ramp Volume, V _R			446				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4092	0.92	Level	10	0	0.952	1.00	4670	
Ramp	446	0.92	Level	10	0	0.952	1.00	509	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.620 using Equation (Exhibit 13-7) V ₁₂ = 3088 pc/h V ₃ or V _{av34} 1582 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4670	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4161	Exhibit 13-8	7050	No
					V _R	509	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	3088	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 28.1 (pc/mi/ln) LOS = D (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.474 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.1 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.0 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.4 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 SB		
Agency or Company		KD Anderson & Associates			Junction		50 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		Existing Plus Phase 1		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3639			V _D = veh/h	
		Ramp Volume, V _R			267				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153	
Ramp	267	0.92	Level	10	0	0.952	1.00	305	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
L _{EQ} =		V ₁₂ = V _F (P _{FM})			L _{EQ} =		V ₁₂ = V _R + (V _F - V _R)P _{FD}		
		(Equation 13-6 or 13-7)					(Equation 13-12 or 13-13)		
P _{FM} =		using Equation (Exhibit 13-6)			P _{FD} =		0.642 using Equation (Exhibit 13-7)		
V ₁₂ =		pc/h			V ₁₂ =		2776 pc/h		
V ₃ or V _{av34}		pc/h (Equation 13-14 or 13-17)			V ₃ or V _{av34}		1377 pc/h (Equation 13-14 or 13-17)		
Is V ₃ or V _{av34} > 2,700 pc/h?		<input type="checkbox"/> Yes <input type="checkbox"/> No			Is V ₃ or V _{av34} > 2,700 pc/h?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2		<input type="checkbox"/> Yes <input type="checkbox"/> No			Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, V _{12a} =		pc/h (Equation 13-16, 13-18, or 13-19)			If Yes, V _{12a} =		pc/h (Equation 13-16, 13-18, or 13-19)		
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4153	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3848	Exhibit 13-8	7050	No
					V _R	305	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2776	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
D _R = 5.475 + 0.00734 v _R + 0.0078 V ₁₂ - 0.00627 L _A					D _R = 4.252 + 0.0086 V ₁₂ - 0.009 L _D				
D _R = (pc/mi/ln)					D _R = 25.9 (pc/mi/ln)				
LOS = (Exhibit 13-2)					LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.455 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.8 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET										
General Information					Site Information					
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB						
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp						
Date Performed	August 2020		Jurisdiction	Stockton						
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Phase 1						
Project Description Gill Women's Medical Center										
Inputs										
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Freeway Number of Lanes, N			3			Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off		
		Ramp Number of Lanes, N			1					
L _{up} = ft		Acceleration Lane Length, L _A			340			L _{down} = ft		
		Deceleration Lane Length L _D								
V _u = veh/h		Freeway Volume, V _F			3639			V _D = veh/h		
		Ramp Volume, V _R			311					
		Freeway Free-Flow Speed, S _{FF}			65.0					
		Ramp Free-Flow Speed, S _{FR}			35.0					
Conversion to pc/h Under Base Conditions										
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p		
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153		
Ramp	311	0.92	Level	10	0	0.952	1.00	355		
UpStream										
DownStream										
Merge Areas					Diverge Areas					
Estimation of v ₁₂					Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2438 pc/h V ₃ or V _{av34} = 1715 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2438 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Checks					Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?	
V _{FO}	4508	Exhibit 13-8		No	V _F		Exhibit 13-8			
					V _{FO} = V _F - V _R		Exhibit 13-8			
					V _R		Exhibit 13-10			
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?	
V _{R12}	2793	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8			
Level of Service Determination (if not F)					Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 25.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					
Speed Determination					Speed Determination					
M _S = 0.361 (Exhibit 13-11)					D _S = (Exhibit 13-12)					
S _R = 56.7 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)					
S ₀ = 60.6 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)					
S = 58.1 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)					

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information				Site Information					
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Phase 1					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N			3		Downstream Adj Ramp			
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N			1		<input type="checkbox"/> Yes <input type="checkbox"/> On			
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A			300		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off			
L _{up} = ft	Deceleration Lane Length L _D					L _{down} = ft			
V _u = veh/h	Freeway Volume, V _F			2936		V _D = veh/h			
	Ramp Volume, V _R			369					
	Freeway Free-Flow Speed, S _{FF}			65.0					
	Ramp Free-Flow Speed, S _{FR}			35.0					
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	369	0.92	Level	10	0	0.952	1.00	421	
UpStream									
DownStream									
Merge Areas				Diverge Areas					
Estimation of v ₁₂				Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 1963 pc/h V ₃ or V _{av34} = 1388 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 1963 pc/h (Equation 13-16, 13-18, or 13-19)				$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Checks				Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3772	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area				Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2384	Exhibit 13-8		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)				Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 22.0 (pc/mi/ln) LOS = C (Exhibit 13-2)				$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					
Speed Determination				Speed Determination					
M _S =	0.342 (Exhibit 13-11)			D _S =	(Exhibit 13-12)				
S _R =	57.1 mph (Exhibit 13-11)			S _R =	mph (Exhibit 13-12)				
S ₀ =	61.8 mph (Exhibit 13-11)			S ₀ =	mph (Exhibit 13-12)				
S =	58.8 mph (Exhibit 13-13)			S =	mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	53 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Phase 1					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			2936			V _D = veh/h	
		Ramp Volume, V _R			182				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	182	0.92	Level	10	0	0.952	1.00	208	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.667 using Equation (Exhibit 13-7) V ₁₂ = 2303 pc/h V ₃ or V _{av34} 1048 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3351	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3143	Exhibit 13-8	7050	No
					V _R	208	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2303	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 21.4 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.447 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.7 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 71.1 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 59.0 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Phase 1					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3022			V _D = veh/h	
		Ramp Volume, V _R			293				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	293	0.92	Level	10	0	0.952	1.00	334	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.658 using Equation (Exhibit 13-7) V ₁₂ = 2385 pc/h V ₃ or V _{av34} 1064 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3449	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3115	Exhibit 13-8	7050	No
					V _R	334	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2385	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 22.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.458 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 71.1 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Phase 1					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		340		Freeway Volume, V _F		3022		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		191		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	191	0.92	Level	10	0	0.952	1.00	218	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2025 pc/h V ₃ or V _{av34} = 1424 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2025 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3667	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2243	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 20.7 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.334 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.3 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.7 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.9 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET										
General Information					Site Information					
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB						
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp						
Date Performed	August 2020		Jurisdiction	Stockton						
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Phase 1						
Project Description Gill Women's Medical Center										
Inputs										
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off			L _{down} = ft		
		Ramp Number of Lanes, N	1							
L _{up} = ft		Acceleration Lane Length, L _A	300		L _{down} = ft			V _D = veh/h		
		Deceleration Lane Length L _D								
V _u = veh/h		Freeway Volume, V _F	3826		L _{down} = ft			V _D = veh/h		
		Ramp Volume, V _R	242							
		Freeway Free-Flow Speed, S _{FF}	65.0							
		Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions										
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p		
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367		
Ramp	242	0.92	Level	10	0	0.952	1.00	276		
UpStream										
DownStream										
Merge Areas					Diverge Areas					
Estimation of v ₁₂					Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)					
L _{EQ} =					L _{EQ} =					
P _{FM} = 0.586 using Equation (Exhibit 13-6)					P _{FD} = using Equation (Exhibit 13-7)					
V ₁₂ = 2559 pc/h					V ₁₂ = pc/h					
V ₃ or V _{av34} = 1808 pc/h (Equation 13-14 or 13-17)					V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17)					
Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No					
If Yes, V _{12a} = 2559 pc/h (Equation 13-16, 13-18, or 13-19)					If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Checks					Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?	
V _{FO}	4643	Exhibit 13-8		No	V _F		Exhibit 13-8			
					V _{FO} = V _F - V _R		Exhibit 13-8			
					V _R		Exhibit 13-10			
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?	
V _{R12}	2835	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8			
Level of Service Determination (if not F)					Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 25.6 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					
Speed Determination					Speed Determination					
M _S = 0.366 (Exhibit 13-11)					D _S = (Exhibit 13-12)					
S _R = 56.6 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)					
S ₀ = 60.3 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)					
S = 58.0 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)					

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 NB		
Agency or Company		KD Anderson & Associates			Junction		53 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		PM Peak Hour			Analysis Year		Existing Plus Phase 1		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3826			V _D = veh/h	
		Ramp Volume, V _R			297				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367	
Ramp	297	0.92	Level	10	0	0.952	1.00	339	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.635 using Equation (Exhibit 13-7) V ₁₂ = 2898 pc/h V ₃ or V _{av34} 1469 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4367	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4028	Exhibit 13-8	7050	No
					V _R	339	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2898	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 26.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.459 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.5 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3639			V _D = veh/h	
		Ramp Volume, V _R			268				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153	
Ramp	268	0.92	Level	10	0	0.952	1.00	306	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.642 using Equation (Exhibit 13-7) V ₁₂ = 2776 pc/h V ₃ or V _{av34} 1377 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4153	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3847	Exhibit 13-8	7050	No
					V _R	306	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2776	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 25.9 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.456 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.8 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off			L _{down} = ft	
	Ramp Number of Lanes, N		1						
L _{up} = ft	Acceleration Lane Length, L _A		340		Freeway Volume, V _F		3639		V _D = veh/h
	Deceleration Lane Length L _D				Ramp Volume, V _R		329		
V _u = veh/h	Freeway Free-Flow Speed, S _{FF}		65.0		Ramp Free-Flow Speed, S _{FR}		35.0		
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153	
Ramp	329	0.92	Level	10	0	0.952	1.00	375	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)				
L _{EQ} = 0.587 using Equation (Exhibit 13-6)					L _{EQ} = using Equation (Exhibit 13-7)				
P _{FM} = 2438 pc/h					P _{FD} = pc/h				
V ₁₂ = 1715 pc/h (Equation 13-14 or 13-17)					V ₁₂ = pc/h (Equation 13-14 or 13-17)				
V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} = 2438 pc/h (Equation 13-16, 13-18, or 13-19)					If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4528	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2813	Exhibit 13-8		4600:All	No	V ₁₂	Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$				
D _R = 25.1 (pc/mi/ln)					D _R = (pc/mi/ln)				
LOS = C (Exhibit 13-2)					LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.362 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 56.7 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 60.6 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.1 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{up} = ft V _u = veh/h	Freeway Number of Lanes, N	3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off L _{down} = ft V _D = veh/h	Ramp Number of Lanes, N	1			
	Acceleration Lane Length, L _A	300							
	Deceleration Lane Length L _D								
	Freeway Volume, V _F	2936							
	Ramp Volume, V _R	369							
	Freeway Free-Flow Speed, S _{FF}	65.0							
	Ramp Free-Flow Speed, S _{FR}	35.0							
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	369	0.92	Level	10	0	0.952	1.00	421	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 1963 pc/h V ₃ or V _{av34} = 1388 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 1963 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3772	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2384	Exhibit 13-8		4600:All	No	V ₁₂	Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 22.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.342 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.1 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.8 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.8 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		Shijo			Freeway/Dir of Travel		SR 99 NB		
Agency or Company		KD Anderson & Associates			Junction		53 Eight Mile Off-Ramp		
Date Performed		August 2020			Jurisdiction		Stockton		
Analysis Time Period		AM Peak Hour			Analysis Year		Existing Plus Project		
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			2936			V _D = veh/h	
		Ramp Volume, V _R			231				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	231	0.92	Level	10	0	0.952	1.00	264	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.664 using Equation (Exhibit 13-7) V ₁₂ = 2314 pc/h V ₃ or V _{av34} 1037 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3351	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3087	Exhibit 13-8	7050	No
					V _R	264	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2314	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 21.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.452 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.6 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 71.2 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.8 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N		3		Downstream Adj Ramp			
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On			
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A				<input checked="" type="checkbox"/> No <input type="checkbox"/> Off			
L _{up} = ft		Deceleration Lane Length L _D		250		L _{down} = ft			
V _u = veh/h		Freeway Volume, V _F		3022		V _D = veh/h			
		Ramp Volume, V _R		293					
		Freeway Free-Flow Speed, S _{FF}		65.0					
		Ramp Free-Flow Speed, S _{FR}		35.0					
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	293	0.92	Level	10	0	0.952	1.00	334	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.658 using Equation (Exhibit 13-7) V ₁₂ = 2385 pc/h V ₃ or V _{av34} 1064 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3449	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3115	Exhibit 13-8	7050	No
					V _R	334	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2385	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 22.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.458 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 71.1 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		3		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		340		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		3022		V _D = veh/h				
	Ramp Volume, V _R		246						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	246	0.92	Level	10	0	0.952	1.00	281	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2025 pc/h V ₃ or V _{av34} = 1424 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2025 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3730	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2306	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 21.2 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.336 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	57.3 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	61.7 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.9 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off		L _{down} = ft		
	Ramp Number of Lanes, N		1						
Acceleration Lane Length, L _A		300		Freeway Volume, V _F		3826		L _{up} = ft	
Deceleration Lane Length L _D				Ramp Volume, V _R		243		V _D = veh/h	
Freeway Free-Flow Speed, S _{FF}		65.0		Ramp Free-Flow Speed, S _{FR}		35.0			
V _u = veh/h									
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367	
Ramp	243	0.92	Level	10	0	0.952	1.00	277	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)				
L _{EQ} = 0.586 using Equation (Exhibit 13-6)					L _{EQ} = using Equation (Exhibit 13-7)				
P _{FM} = 2559 pc/h					P _{FD} = pc/h				
V ₁₂ = 1808 pc/h (Equation 13-14 or 13-17)					V ₁₂ = pc/h (Equation 13-14 or 13-17)				
V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} = 2559 pc/h (Equation 13-16, 13-18, or 13-19)					If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4644	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2836	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 25.6 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.366 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 56.6 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 60.3 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.0 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	53 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing Plus Project					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3826			V _D = veh/h	
		Ramp Volume, V _R			320				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367	
Ramp	320	0.92	Level	10	0	0.952	1.00	365	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.634 using Equation (Exhibit 13-7) V ₁₂ = 2902 pc/h V ₃ or V _{av34} 1465 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4367	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4002	Exhibit 13-8	7050	No
					V _R	365	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2902	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 26.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.461 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.4 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.5 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3639			V _D = veh/h	
		Ramp Volume, V _R			267				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153	
Ramp	267	0.92	Level	10	0	0.952	1.00	305	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.642 using Equation (Exhibit 13-7) V ₁₂ = 2776 pc/h V ₃ or V _{av34} 1377 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4153	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3848	Exhibit 13-8	7050	No
					V _R	305	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2776	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 25.9 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.455 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.5 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 69.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.8 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		3		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		340		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		3639		V _D = veh/h				
	Ramp Volume, V _R		309						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3639	0.92	Level	10	0	0.952	1.00	4153	
Ramp	309	0.92	Level	10	0	0.952	1.00	353	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2438 pc/h V ₃ or V _{av34} = 1715 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2438 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4506	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2791	Exhibit 13-8		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ D _R = 25.0 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 v_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.361 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.7 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	60.6 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.1 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	52 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	AM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		3		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		300		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		2936		V _D = veh/h				
	Ramp Volume, V _R		369						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	369	0.92	Level	10	0	0.952	1.00	421	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13)				
L _{EQ} = 0.586 using Equation (Exhibit 13-6)					L _{EQ} = using Equation (Exhibit 13-7)				
P _{FM} = 1963 pc/h					P _{FD} = pc/h				
V ₁₂ = 1388 pc/h (Equation 13-14 or 13-17)					V ₁₂ = pc/h (Equation 13-14 or 13-17)				
V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, V _{12a} = 1963 pc/h (Equation 13-16, 13-18, or 13-19)					If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3772	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2384	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$					$D_R = 4.252 + 0.0086 v_{12} - 0.009 L_D$				
D _R = 22.0 (pc/mi/ln)					D _R = (pc/mi/ln)				
LOS = C (Exhibit 13-2)					LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.342 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 57.1 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 61.8 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.8 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

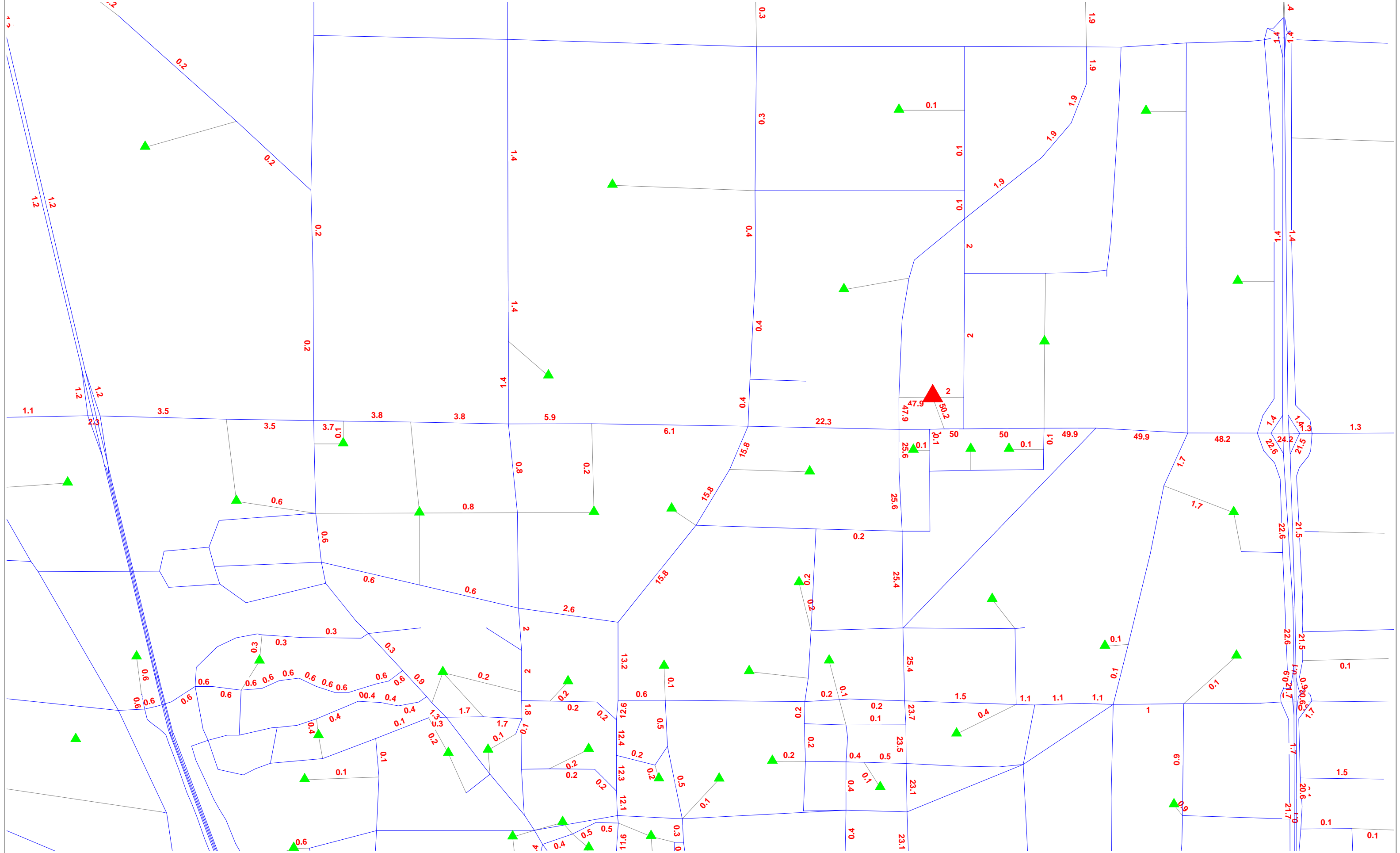
RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo			Freeway/Dir of Travel	SR 99 NB				
Agency or Company	KD Anderson & Associates			Junction	53 Eight Mile Off-Ramp				
Date Performed	August 2020			Jurisdiction	Stockton				
Analysis Time Period	AM Peak Hour			Analysis Year	Existing				
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3		Downstream Adj Ramp		
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1		<input type="checkbox"/> Yes <input type="checkbox"/> On		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A					<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		
L _{up} = ft		Deceleration Lane Length L _D			300		L _{down} = ft		
V _u = veh/h		Freeway Volume, V _F			2936		V _D = veh/h		
		Ramp Volume, V _R			177				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	2936	0.92	Level	10	0	0.952	1.00	3351	
Ramp	177	0.92	Level	10	0	0.952	1.00	202	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v₁₂					Estimation of v₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.667 using Equation (Exhibit 13-7) V ₁₂ = 2302 pc/h V ₃ or V _{av34} 1049 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3351	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3149	Exhibit 13-8	7050	No
					V _R	202	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2302	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 21.3 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.446 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.7 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 71.1 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 59.0 mph (Exhibit 13-13)				

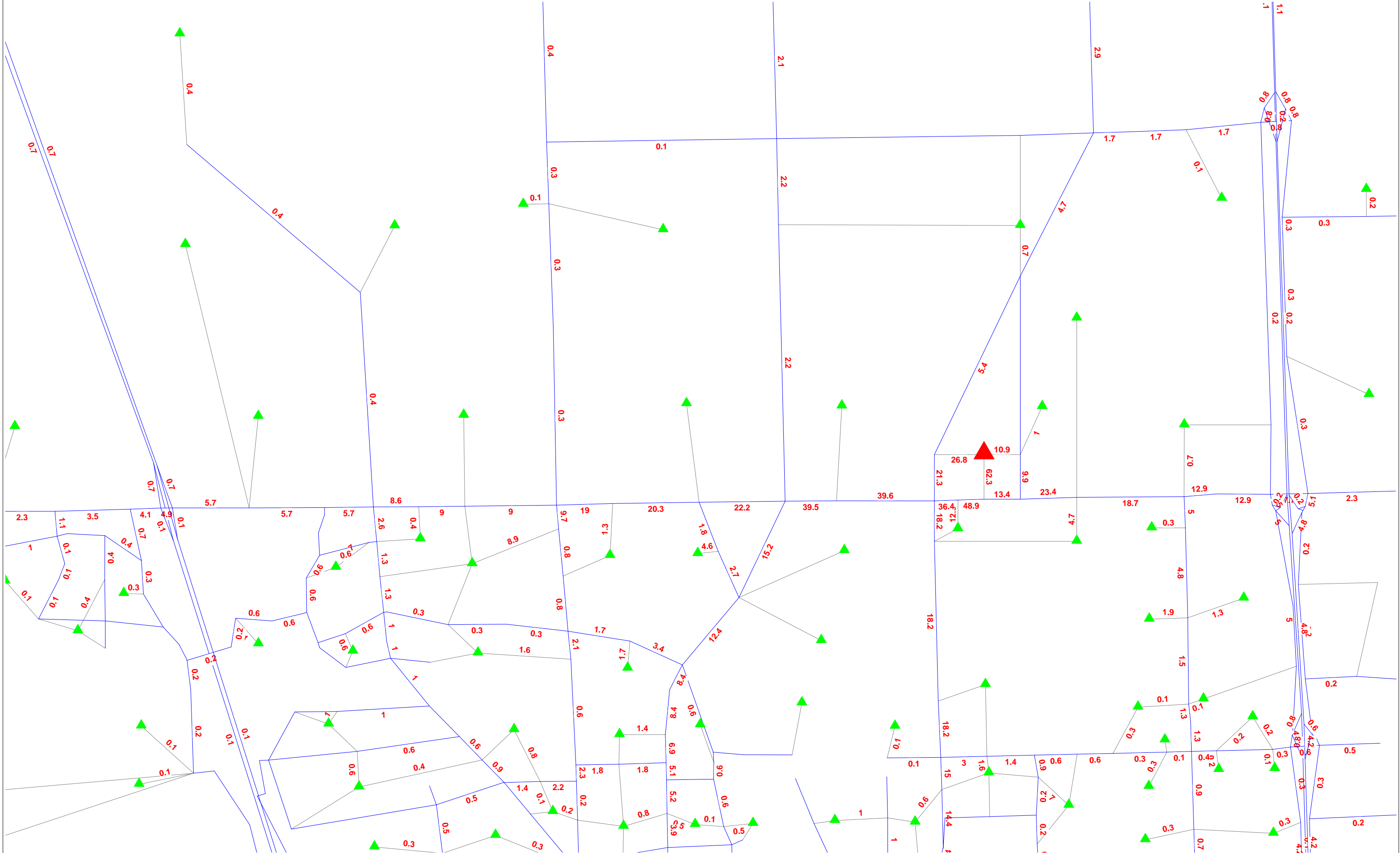
RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	50 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			250			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3022			V _D = veh/h	
		Ramp Volume, V _R			293				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	293	0.92	Level	10	0	0.952	1.00	334	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.658 using Equation (Exhibit 13-7) V ₁₂ = 2385 pc/h V ₃ or V _{av34} 1064 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3449	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	3115	Exhibit 13-8	7050	No
					V _R	334	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2385	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 22.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11) S _R = mph (Exhibit 13-11) S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					D _S = 0.458 (Exhibit 13-12) S _R = 54.5 mph (Exhibit 13-12) S ₀ = 71.1 mph (Exhibit 13-12) S = 58.7 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 SB					
Agency or Company	KD Anderson & Associates		Junction	51 Eight Mile On-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Freeway Number of Lanes, N		3		Downstream Adj Ramp <input type="checkbox"/> Yes <input type="checkbox"/> On <input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
	Ramp Number of Lanes, N		1		L _{down} =		ft		
Acceleration Lane Length, L _A		340		Freeway Volume, V _F		3022		V _D =	
Deceleration Lane Length L _D				Ramp Volume, V _R		186		veh/h	
L _{up} =		ft		Freeway Free-Flow Speed, S _{FF}		65.0			
V _u =		veh/h		Ramp Free-Flow Speed, S _{FR}		35.0			
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3022	0.92	Level	10	0	0.952	1.00	3449	
Ramp	186	0.92	Level	10	0	0.952	1.00	212	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.587 using Equation (Exhibit 13-6) V ₁₂ = 2025 pc/h V ₃ or V _{av34} = 1424 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2025 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	3661	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2237	Exhibit 13-8 4600:All		No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 20.7 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = 0.334 (Exhibit 13-11)					D _S = (Exhibit 13-12)				
S _R = 57.3 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)				
S ₀ = 61.7 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)				
S = 58.9 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo	Freeway/Dir of Travel	SR 99 NB						
Agency or Company	KD Anderson & Associates	Junction	52 Eight Mile On-Ramp						
Date Performed	August 2020	Jurisdiction	Stockton						
Analysis Time Period	PM Peak Hour	Analysis Year	Existing						
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp	Freeway Number of Lanes, N		3		Downstream Adj Ramp				
<input type="checkbox"/> Yes <input type="checkbox"/> On	Ramp Number of Lanes, N		1		<input type="checkbox"/> Yes <input type="checkbox"/> On				
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	Acceleration Lane Length, L _A		300		<input checked="" type="checkbox"/> No <input type="checkbox"/> Off				
L _{up} = ft	Deceleration Lane Length L _D				L _{down} = ft				
V _u = veh/h	Freeway Volume, V _F		3826		V _D = veh/h				
	Ramp Volume, V _R		242						
	Freeway Free-Flow Speed, S _{FF}		65.0						
	Ramp Free-Flow Speed, S _{FR}		35.0						
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367	
Ramp	242	0.92	Level	10	0	0.952	1.00	276	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = P _{FM} = 0.586 using Equation (Exhibit 13-6) V ₁₂ = 2559 pc/h V ₃ or V _{av34} = 1808 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = 2559 pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}	4643	Exhibit 13-8		No	V _F		Exhibit 13-8		
					V _{FO} = V _F - V _R		Exhibit 13-8		
					V _R		Exhibit 13-10		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}	2835	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8		
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 25.6 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S =	0.366 (Exhibit 13-11)				D _S =	(Exhibit 13-12)			
S _R =	56.6 mph (Exhibit 13-11)				S _R =	mph (Exhibit 13-12)			
S ₀ =	60.3 mph (Exhibit 13-11)				S ₀ =	mph (Exhibit 13-12)			
S =	58.0 mph (Exhibit 13-13)				S =	mph (Exhibit 13-13)			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst	Shijo		Freeway/Dir of Travel	SR 99 NB					
Agency or Company	KD Anderson & Associates		Junction	53 Eight Mile Off-Ramp					
Date Performed	August 2020		Jurisdiction	Stockton					
Analysis Time Period	PM Peak Hour		Analysis Year	Existing					
Project Description Gill Women's Medical Center									
Inputs									
Upstream Adj Ramp		Freeway Number of Lanes, N			3			Downstream Adj Ramp	
<input type="checkbox"/> Yes <input type="checkbox"/> On		Ramp Number of Lanes, N			1			<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Acceleration Lane Length, L _A						<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = ft		Deceleration Lane Length L _D			300			L _{down} = ft	
V _u = veh/h		Freeway Volume, V _F			3826			V _D = veh/h	
		Ramp Volume, V _R			294				
		Freeway Free-Flow Speed, S _{FF}			65.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3826	0.92	Level	10	0	0.952	1.00	4367	
Ramp	294	0.92	Level	10	0	0.952	1.00	336	
UpStream									
DownStream									
Merge Areas					Diverge Areas				
Estimation of v₁₂					Estimation of v₁₂				
$V_{12} = V_F (P_{FM})$ (Equation 13-6 or 13-7) L _{EQ} = using Equation (Exhibit 13-6) P _{FM} = V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ (Equation 13-12 or 13-13) L _{EQ} = P _{FD} = 0.635 using Equation (Exhibit 13-7) V ₁₂ = 2897 pc/h V ₃ or V _{av34} 1470 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4367	Exhibit 13-8	7050	No
					V _{FO} = V _F - V _R	4031	Exhibit 13-8	7050	No
					V _R	336	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	2897	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 26.5 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11) S _R = mph (Exhibit 13-11) S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					D _S = 0.458 (Exhibit 13-12) S _R = 54.5 mph (Exhibit 13-12) S ₀ = 69.5 mph (Exhibit 13-12) S = 58.7 mph (Exhibit 13-13)				





Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-003

Location: Eight Mile Road between Lower Sacramento Road and Davis Road

Start Time	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	14	116			20	102				
12:15	7	115			22	102				
12:30	13	109			13	92				
12:45	16	104	50	444	6	111	61	407	111	851
1:00	9	119			6	116				
1:15	7	140			11	102				
1:30	11	121			9	109				
1:45	13	139	40	519	12	121	38	448	78	967
2:00	4	143			5	136				
2:15	6	196			8	125				
2:30	13	180			1	162				
2:45	7	184	30	703	3	176	17	599	47	1302
3:00	7	128			7	139				
3:15	7	141			8	183				
3:30	14	170			17	193				
3:45	14	149	42	588	14	168	46	683	88	1271
4:00	13	146			15	183				
4:15	14	163			20	180				
4:30	30	163			26	158				
4:45	43	168	100	640	35	159	96	680	196	1320
5:00	40	180			33	171				
5:15	45	161			36	208				
5:30	54	174			41	159				
5:45	57	166	196	681	70	166	180	704	376	1385
6:00	70	143			51	150				
6:15	92	142			65	139				
6:30	140	149			74	140				
6:45	129	146	431	580	82	114	272	543	703	1123
7:00	168	118			133	105				
7:15	185	99			110	127				
7:30	178	107			129	109				
7:45	166	114	697	438	164	100	536	441	1233	879
8:00	154	109			135	97				
8:15	159	71			133	118				
8:30	150	82			101	79				
8:45	131	76	594	338	100	89	469	383	1063	721
9:00	96	78			90	68				
9:15	94	58			70	76				
9:30	121	73			93	88				
9:45	109	63	420	272	81	65	334	297	754	569
10:00	106	48			93	68				
10:15	84	45			77	45				
10:30	93	56			93	48				
10:45	85	47	368	196	101	34	364	195	732	391
11:00	92	41			93	39				
11:15	102	31			85	24				
11:30	112	29			111	22				
11:45	93	22	399	123	81	14	370	99	769	222
Total	3367	5522	3367	5522	2783	5479	2783	5479	6150	11001
Combined Total	8889		8889		8262		8262		17151	
AM Peak	7:00 AM				7:30 AM					
Vol.	697				561					
P.H.F.	0.942				0.855					
PM Peak			2:00 PM				3:15 PM			
Vol.			703				727			
P.H.F.			0.897				0.942			
Percentage	37.9%	62.1%			33.7%	66.3%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-004

Location: Eight Mile Road between Lower Sacramento Road and West Lane

Start Time	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	10	156			32	116				
12:15	18	145			11	127				
12:30	18	145			10	133				
12:45	14	145	60	591	10	128	63	504	123	1095
1:00	8	139			16	116				
1:15	12	169			11	119				
1:30	15	157			12	143				
1:45	8	180	43	645	8	158	47	536	90	1181
2:00	9	241			6	152				
2:15	13	218			4	191				
2:30	12	239			9	205				
2:45	11	170	45	868	9	179	28	727	73	1595
3:00	13	162			4	225				
3:15	15	219			21	214				
3:30	19	194			12	219				
3:45	17	190	64	765	15	192	52	850	116	1615
4:00	21	195			19	240				
4:15	34	187			25	210				
4:30	53	207			39	204				
4:45	56	186	164	775	39	208	122	862	286	1637
5:00	65	251			38	234				
5:15	70	228			50	196				
5:30	81	229			74	210				
5:45	114	160	330	868	71	189	233	829	563	1697
6:00	129	170			82	177				
6:15	173	173			90	176				
6:30	211	163			112	148				
6:45	198	143	711	649	143	133	427	634	1138	1283
7:00	235	121			147	140				
7:15	263	116			202	123				
7:30	263	137			189	112				
7:45	214	132	975	506	174	120	712	495	1687	1001
8:00	230	92			146	120				
8:15	182	97			126	112				
8:30	155	72			144	95				
8:45	130	102	697	363	117	79	533	406	1230	769
9:00	122	88			106	97				
9:15	147	70			114	102				
9:30	145	64			100	77				
9:45	114	71	528	293	109	85	429	361	957	654
10:00	104	63			107	53				
10:15	142	52			107	55				
10:30	114	42			125	49				
10:45	109	48	469	205	112	44	451	201	920	406
11:00	122	37			102	27				
11:15	134	32			139	30				
11:30	128	20			99	23				
11:45	149	20	533	109	116	27	456	107	989	216
Total	4619	6637	4619	6637	3553	6512	3553	6512	8172	13149
Combined Total	11256		11256		10065		10065		21321	
AM Peak	7:00 AM				7:00 AM					
Vol.	975				712					
P.H.F.	0.927				0.881					
PM Peak		4:45 PM				3:15 PM				
Vol.		894				865				
P.H.F.		0.890				0.901				
Percentage	41.0%	59.0%			35.3%	64.7%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-002

Location: West Lane between Eight Mile Road and Ham Lane

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	7	98			12	96				
12:15	11	113			7	73				
12:30	8	110			1	75				
12:45	4	98	30	419	2	96	22	340	52	759
1:00	5	99			11	100				
1:15	5	108			2	86				
1:30	6	111			6	95				
1:45	3	112	19	430	6	104	25	385	44	815
2:00	6	121			6	98				
2:15	5	127			2	128				
2:30	9	121			0	121				
2:45	5	128	25	497	2	100	10	447	35	944
3:00	4	125			3	108				
3:15	4	153			4	112				
3:30	15	144			2	116				
3:45	9	125	32	547	7	89	16	425	48	972
4:00	6	150			7	94				
4:15	9	134			13	129				
4:30	16	124			12	99				
4:45	22	137	53	545	17	116	49	438	102	983
5:00	28	145			18	109				
5:15	34	128			14	108				
5:30	43	143			21	80				
5:45	38	108	143	524	25	105	78	402	221	926
6:00	52	103			41	80				
6:15	85	77			55	79				
6:30	74	81			74	67				
6:45	71	77	282	338	80	81	250	307	532	645
7:00	86	54			110	85				
7:15	113	58			170	64				
7:30	123	74			160	40				
7:45	106	56	428	242	105	63	545	252	973	494
8:00	88	53			100	56				
8:15	90	46			95	45				
8:30	99	43			88	54				
8:45	82	47	359	189	86	51	369	206	728	395
9:00	64	47			77	48				
9:15	95	44			80	50				
9:30	91	29			71	32	0			
9:45	79	20	329	140	91	40	319	170	648	310
10:00	79	25			74	18				
10:15	95	40			96	32				
10:30	88	22			92	14				
10:45	79	18	341	105	76	31	338	95	679	200
11:00	88	20			73	28				
11:15	95	9			68	12				
11:30	95	14			83	9				
11:45	110	8	388	51	77	20	301	69	689	120
Total	2429	4027	2429	4027	2322	3536	2322	3536	4751	7563
Combined Total	6456		6456		5858		5858		12314	
AM Peak	11:45 AM				7:00 AM					
Vol.	431				545					
P.H.F.	0.954				0.801					
PM Peak			3:15 PM				2:15 PM			
Vol.			572				457			
P.H.F.			0.894				0.893			
Percentage	37.6%	62.4%			39.6%	60.4%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-005

Location: Eight Mile Road between West Lane and Holman Road

Start Time	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	3	79			22	67				
12:15	4	96			9	63				
12:30	6	69			7	88				
12:45	7	85	20	329	5	64	43	282	63	611
1:00	4	92			13	61				
1:15	5	82			11	61				
1:30	7	99			6	81				
1:45	9	93	25	366	4	86	34	289	59	655
2:00	4	95			8	121				
2:15	2	99			5	110				
2:30	7	108			7	120				
2:45	3	128	16	430	5	94	25	445	41	875
3:00	8	105			4	139				
3:15	9	88			13	143				
3:30	13	114			7	110				
3:45	11	115	41	422	10	104	34	496	75	918
4:00	10	109			14	146				
4:15	20	119			11	135				
4:30	27	95			20	138				
4:45	39	111	96	434	24	145	69	564	165	998
5:00	43	114			17	133				
5:15	58	121			27	116				
5:30	61	136			46	114				
5:45	58	122	220	493	49	103	139	466	359	959
6:00	76	89			53	96				
6:15	101	91			63	90				
6:30	102	82			94	97				
6:45	135	76	414	338	80	68	290	351	704	689
7:00	119	52			96	69				
7:15	131	61			130	70				
7:30	138	63			120	69				
7:45	157	61	545	237	103	64	449	272	994	509
8:00	105	60			81	58				
8:15	125	46			69	65				
8:30	106	38			94	53				
8:45	85	42	421	186	64	45	308	221	729	407
9:00	72	52			62	40				
9:15	50	39			73	67				
9:30	72	34			67	40				
9:45	83	33	277	158	76	50	278	197	555	355
10:00	61	33			74	33				
10:15	58	39			77	36				
10:30	87	21			65	30				
10:45	67	20	273	113	60	24	276	123	549	236
11:00	56	29			73	20				
11:15	73	23			70	20				
11:30	70	17			63	18				
11:45	81	7	280	76	69	14	275	72	555	148
Total	2628	3582	2628	3582	2220	3778	2220	3778	4848	7360
Combined Total	6210		6210		5998		5998		12208	
AM Peak	7:00 AM				7:00 AM					
Vol.	545				449					
P.H.F.	0.868				0.863					
PM Peak			5:00 PM				4:00 PM			
Vol.			493				564			
P.H.F.			0.906				0.966			
Percentage	42.3%	57.7%			37.0%	63.0%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-007

Location: West Lane between Morada Land and Eight Mile Road

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	16	110			26	108				
12:15	14	105			17	113				
12:30	11	139			15	116				
12:45	11	113	52	467	13	116	71	453	123	920
1:00	8	115			11	117				
1:15	7	103			16	131				
1:30	5	113			5	127				
1:45	8	144	28	475	10	127	42	502	70	977
2:00	4	110			11	140				
2:15	3	129			11	206				
2:30	4	172			7	222				
2:45	6	165	17	576	4	210	33	778	50	1354
3:00	9	153			5	151				
3:15	3	187			4	140				
3:30	11	177			4	161				
3:45	11	197	34	714	6	197	19	649	53	1363
4:00	14	198			12	128				
4:15	10	165			10	138				
4:30	22	172			16	165				
4:45	26	175	72	710	18	190	56	621	128	1331
5:00	29	170			20	162				
5:15	41	181			20	173				
5:30	52	184			15	164				
5:45	57	177	179	712	38	136	93	635	272	1347
6:00	44	149			40	124				
6:15	57	111			51	137				
6:30	99	123			96	143				
6:45	84	107	284	490	153	136	340	540	624	1030
7:00	111	88			122	127				
7:15	102	77			174	118				
7:30	144	95			233	107				
7:45	142	95	499	355	239	94	768	446	1267	801
8:00	160	95			195	116				
8:15	107	88			180	88				
8:30	96	63			137	76				
8:45	108	63	471	309	136	66	648	346	1119	655
9:00	84	57			109	76				
9:15	69	64			118	72				
9:30	97	60			112	68	0			
9:45	82	43	332	224	117	55	456	271	788	495
10:00	80	43			119	65				
10:15	98	39			108	32				
10:30	102	42			116	55				
10:45	114	35	394	159	112	35	455	187	849	346
11:00	98	32			100	40				
11:15	112	24			112	42				
11:30	106	16			95	28				
11:45	105	20	421	92	109	22	416	132	837	224
Total	2783	5283	2783	5283	3397	5560	3397	5560	6180	10843
Combined Total	8066		8066		8957		8957		17023	
AM Peak	7:30 AM				7:30 AM					
Vol.	553				847					
P.H.F.	0.864				0.886					
PM Peak		3:15 PM				2:15 PM				
Vol.		759				789				
P.H.F.		0.962				0.889				
Percentage	34.5%	65.5%			37.9%	62.1%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-008

Location: Morada Lane between Lower Sacramento Road and West Lane

Start Time	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	4	15			2	17				
12:15	2	18			3	27				
12:30	1	13			1	28				
12:45	1	19	8	65	0	22	6	94	14	159
1:00	4	15			0	15				
1:15	1	22			2	24				
1:30	0	16			1	17				
1:45	0	15	5	68	0	30	3	86	8	154
2:00	0	11			0	30				
2:15	0	15			0	44				
2:30	1	24			0	34				
2:45	2	33	3	83	2	34	2	142	5	225
3:00	0	17			4	31				
3:15	0	17			2	39				
3:30	1	18			1	38				
3:45	0	19	1	71	1	43	8	151	9	222
4:00	1	20			1	30				
4:15	2	19			2	38				
4:30	5	25			3	36				
4:45	4	19	12	83	2	35	8	139	20	222
5:00	3	34			3	45				
5:15	1	22			4	52				
5:30	3	28			6	51				
5:45	1	27	8	111	4	49	17	197	25	308
6:00	5	16			9	39				
6:15	10	18			7	23				
6:30	8	9			8	28				
6:45	17	15	40	58	23	23	47	113	87	171
7:00	26	25			19	24				
7:15	29	18			19	21				
7:30	36	12			25	24				
7:45	44	10	135	65	33	19	96	88	231	153
8:00	28	11			25	13				
8:15	21	12			20	14				
8:30	18	9			17	14				
8:45	19	10	86	42	23	10	85	51	171	93
9:00	15	10			17	9				
9:15	22	11			9	17				
9:30	20	9			20	11				
9:45	9	7	66	37	15	10	61	47	127	84
10:00	17	12			14	14				
10:15	16	4			21	5				
10:30	15	7			19	8				
10:45	10	6	58	29	17	6	71	33	129	62
11:00	14	5			16	8				
11:15	8	4			19	3				
11:30	10	3			15	5				
11:45	9	6	41	18	18	2	68	18	109	36
Total	463	730	463	730	472	1159	472	1159	935	1889

Combined Total	1193		1193		1631		1631		2824	
AM Peak	7:15 AM				7:30 AM					
Vol.	137				103					
P.H.F.	0.778				0.780					
PM Peak			5:00 PM				5:00 PM			
Vol.			111				197			
P.H.F.			0.816				0.947			
Percentage	38.8%	61.2%			28.9%	71.1%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-011

Location: West Lane between Morada Lane and Knickerbocker Drive

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	30	189			29	149				
12:15	18	143			24	118				
12:30	14	189			13	143				
12:45	18	159	80	680	12	135	78	545	158	1225
1:00	12	143			12	146				
1:15	11	153			13	143				
1:30	6	152			8	149				
1:45	10	164	39	612	7	137	40	575	79	1187
2:00	13	210			11	132				
2:15	12	225			11	192				
2:30	5	271			7	247				
2:45	9	208	39	914	3	245	32	816	71	1730
3:00	8	223			2	193				
3:15	5	234			11	172				
3:30	12	246			6	175				
3:45	11	218	36	921	10	214	29	754	65	1675
4:00	18	237			13	176				
4:15	14	196			10	167				
4:30	16	220			20	180				
4:45	31	206	79	859	28	189	71	712	150	1571
5:00	35	252			20	172				
5:15	43	230			31	192				
5:30	51	220			16	192				
5:45	42	194	171	896	45	165	112	721	283	1617
6:00	60	208			50	142				
6:15	82	176			64	146				
6:30	179	183			87	161				
6:45	222	146	543	713	158	135	359	584	902	1297
7:00	143	139			184	118				
7:15	147	137			174	131				
7:30	190	144			234	111				
7:45	198	108	678	528	269	123	861	483	1539	1011
8:00	203	128			217	102				
8:15	147	116			214	132				
8:30	136	110			201	93				
8:45	138	93	624	447	195	75	827	402	1451	849
9:00	110	84			160	63				
9:15	82	102			150	80				
9:30	122	99			154	76	0			
9:45	114	71	428	356	145	59	609	278	1037	634
10:00	119	69			138	54				
10:15	117	48			142	39				
10:30	174	67			132	51				
10:45	135	45	545	229	157	35	569	179	1114	408
11:00	148	44			142	34				
11:15	142	39			143	35				
11:30	149	37			121	31				
11:45	141	34	580	154	149	30	555	130	1135	284
Total	3842	7309	3842	7309	4142	6179	4142	6179	7984	13488
Combined Total	11151		11151		10321		10321		21472	
AM Peak	7:15 AM				7:30 AM					
Vol.	738				934					
P.H.F.	0.909				0.868					
PM Peak			2:30 PM				2:15 PM			
Vol.			936				877			
P.H.F.			0.853				0.888			
Percentage	34.5%	65.5%			40.1%	59.9%				

Prepared by NDS/ATD

Volumes for: Tuesday, May 05, 2015

City: Stockton

Project #: 15-7397-009

Location: Morada Lane between West Lane and Holman Road

Start Time	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	16	94			17	87				
12:15	13	80			15	71				
12:30	10	80			5	78				
12:45	7	87	46	341	9	76	46	312	92	653
1:00	16	59			14	80				
1:15	11	70			11	60				
1:30	4	80			7	80				
1:45	9	91	40	300	9	89	41	309	81	609
2:00	9	112			6	115				
2:15	11	140			4	117				
2:30	2	266			1	141				
2:45	4	181	26	699	4	156	15	529	41	1228
3:00	4	151			5	129				
3:15	6	122			7	126				
3:30	3	130			7	106				
3:45	7	145	20	548	8	161	27	522	47	1070
4:00	6	146			5	133				
4:15	11	93			6	112				
4:30	10	121			13	121				
4:45	9	148	36	508	10	128	34	494	70	1002
5:00	17	142			8	123				
5:15	13	147			30	123				
5:30	16	146			25	133				
5:45	20	119	66	554	39	139	102	518	168	1072
6:00	38	129			29	139				
6:15	38	114			59	132				
6:30	105	134			107	112				
6:45	159	103	340	480	120	92	315	475	655	955
7:00	169	100			106	88				
7:15	147	110			90	81				
7:30	165	108			123	73				
7:45	141	102	622	420	135	96	454	338	1076	758
8:00	137	107			131	70				
8:15	113	145			121	102				
8:30	86	90			119	58				
8:45	62	67	398	409	122	51	493	281	891	690
9:00	64	76			78	58				
9:15	47	65			92	52				
9:30	61	65			83	52				
9:45	56	45	228	251	68	36	321	198	549	449
10:00	60	66			62	24				
10:15	69	38			87	42				
10:30	101	46			69	27				
10:45	64	36	294	186	70	33	288	126	582	312
11:00	80	28			87	25				
11:15	73	29			81	17				
11:30	61	25			68	17				
11:45	71	19	285	101	74	22	310	81	595	182
Total	2401	4797	2401	4797	2446	4183	2446	4183	4847	8980
Combined Total	7198		7198		6629		6629		13827	
AM Peak	6:45 AM				7:30 AM					
Vol.	640				510					
P.H.F.	0.947				0.944					
PM Peak		2:15 PM				2:30 PM				
Vol.		738				552				
P.H.F.		0.694				0.885				
Percentage	33.4%	66.6%			36.9%	63.1%				

2014 Traffic Volumes on California State Highways



2014 Traffic Volumes Book

Dist	Route	County	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
10	5	SJ	R 11.801	OLD ROUTE 50; 11TH STREET	2150	25500	22900	3350	48500	45000
10	5	SJ	R 12.623	JCT. RTE. 205 WEST	3500	50000	46500	10100	150000	145000
10	5	SJ	R 14.834	JCT. RTE. 120 EAST	10100	150000	145000	8900	120000	114000
10	5	SJ	R 17.516	LATHROP ROAD	8500	110000	108000	10300	104000	103000
10	5	SJ	R 20.951	FRENCH CAMP OC	10300	104000	103000	10300	109000	107000
10	5	SJ	R 21.439	MATHEWS ROAD	10100	108000	105000	10100	108000	105000
10	5	SJ	R 22.508	FRENCH CAMP TURNPIKE	10100	108000	105000	9100	110000	108000
10	5	SJ	24.637	STOCKTON, EIGHTH STREET	10800	130000	128000	11600	141000	138000
10	5	SJ	25.365	STOCKTON, JCT. RTE. 4	11500	146000	136000	15400	149000	132000
10	5	SJ	26.185	STOCKTON, JCT. RTE. 4	14100	149000	132000	14100	149000	130000
10	5	SJ	26.991	PERSHING AVENUE	11600	136000	121000	11400	130000	116000
10	5	SJ	27.906	STOCKTON, MONTE DIABLO AVENUE	11500	134000	118000	12900	107000	94000
10	5	SJ	28.533	COUNTRY CLUB BOULEVARD	12900	107000	94000	13200	121000	106000
10	5	SJ	29.516	PLYMOUTH RD/RYPDE AVE	13200	121000	106000	12900	125000	111000
10	5	SJ	29.99	STOCKTON, MARCH LANE	12900	125000	111000	11900	120000	106000
10	5	SJ	31.451	BENJAMIN HOLT DRIVE	11900	120000	106000	11500	112000	99000
10	5	SJ	32.664	STOCKTON, HAMMER LANE	11500	112000	99000	10300	78000	73000
10	5	SJ	35.302	ATHERTON/EIGHT MILE ROADS	10300	87000	74000	6700	80000	63000
10	5	SJ	39.573	JCT. RTE. 12	6700	80000	63000	4250	57000	53000
10	5	SJ	44.712	PELTIER ROAD	4650	57000	51000	4600	56000	48000
10	5	SJ	47.602	WALNUT GROVE ROAD	4600	56000	48000	4800	60000	51000
10	5	SJ	49.819	SAN JOAQUIN/SACRAMENTO COUNTY LINE	5800	56000	50000			
3	5	SAC	0.018	SAN JOAQUIN/SACRAMENTO COUNTY LINE				4300	56000	50000
3	5	SAC	2.13	TWIN CITIES ROAD	4300	56000	50000	4350	60000	50000
3	5	SAC	8.493	HOOD FRANKLIN ROAD	4350	60000	50000	4900	65000	60000
3	5	SAC	10.826	ELK GROVE BOULEVARD	4900	66000	60000	6200	81000	76000
3	5	SAC	12.037	LAGUNA BOULEVARD	6200	81000	76000	8700	96000	91000
3	5	SAC	16.147	SACRAMENTO, POCKET/MEADOWVIEW ROADS	8700	95000	91000	9300	103000	101000
3	5	SAC	17.185	SACRAMENTO, FLORIN ROAD	9300	106000	101000	10700	128000	122000
3	5	SAC	18.651	SACRAMENTO, 43RD AVENUE	10700	124000	122000	13200	156000	135000
3	5	SAC	19.304	SACRAMENTO, SEAMAS AVENUE	13200	156000	135000	13300	157000	144000

2014 Traffic Volumes Book

Dist	Route	County		Postmile	Description	Back	Back	Back AADT	Ahead	Ahead	Ahead AADT
						Peak Hour	Peak Month		Peak Hour	Peak Month	
10	99	STA	R	13.263	MODESTO, HATCH ROAD/9TH STREET	10200	112000	107000	10400	112000	111000
10	99	STA	R	14.473	MODESTO, CROWS LANDING ROAD	10400	112000	111000	10700	120000	119000
10	99	STA	R	15.098	MODESTO, TUOLUMNE BOULEVARD	10700	120000	119000	11000	127000	124000
10	99	STA	R	15.753	MODESTO, H STREET	11000	127000	124000	10600	126000	124000
10	99	STA	R	16.121	MODESTO, JCT. RTE. 132	10800	128000	126000	11500	139000	132000
10	99	STA	R	16.825	KANSAS AVENUE	10600	139000	134000	11300	142000	139000
10	99	STA	M	18.52	MODESTO, CARPENTER ROAD	11300	142000	139000	11500	142000	140000
10	99	STA	R	20.222	MODESTO, BECKWITH ROAD	11500	142000	140000	9800	122000	120000
10	99	STA	R	21.743	MODESTO, PELANDALE AVENUE	9800	122000	120000	9900	122000	121000
10	99	STA	R	22.558	SALIDA, JCT. RTE. 219 EAST	9900	127000	121000	9500	129000	122000
10	99	STA	R	24.272	HAMMET ROAD	9600	138000	127000	9600	118000	112000
10	99	STA	R	24.75	STANISLAUS/SAN JOAQUIN COUNTY LINE	9600	118000	112000			
10	99	SJ		0	STANISLAUS/SAN JOAQUIN COUNTY LINE				9600	118000	112000
10	99	SJ		0.888	RIPON, MAIN STREET	9600	118000	112000	10000	118000	116000
10	99	SJ		1.708	MILGEO AVENUE	10000	118000	116000	10100	132000	129000
10	99	SJ		2.374	JACKTONE ROAD	9800	118000	114000	9500	119000	114000
10	99	SJ		5.822	SOUTH JCT. RTE. 120	9600	118000	107000	7600	91000	83000
10	99	SJ		6.654	MANTECA, NORTH JCT. RTE. 120	7600	91000	83000	6000	72000	66000
10	99	SJ		8.829	NORTH MANTECA	6000	72000	66000	6300	74000	70000
10	99	SJ		11.468	TURNER STATION/FRENCH CAMP ROAD	5900	74000	70000	5900	72000	69000
10	99	SJ		16.698	STOCKTON, MARIPOSA ROAD	6700	78000	73000	7900	93000	87000
10	99	SJ		17.216	JCT. RTE. 4 EAST	7900	93000	87000	9400	100000	94000
10	99	SJ		18.022	JCT. RTE. 26 WEST	9500	100000	94000	9700	104000	96000
10	99	SJ		18.683	JCT. RTE. 4 WEST	9700	114000	105000	8500	108000	95000
10	99	SJ		19.29	JCT. RTE. 26 EAST	8500	108000	95000	1000	11400	10000
10	99	SJ		20.336	JCT. RTE. 88 NORTHEAST	10000	113000	99000	10700	96000	86000
10	99	SJ		20.876	CHEROKEE ROAD	11500	101000	92000	9700	89000	82000
10	99	SJ		21.674	WILSON WAY	9700	89000	82000	8700	102000	87000
10	99	SJ		22.922	HAMMER LANE	7300	86000	81000	7100	76000	73000
10	99	SJ		24.033	MORADA LANE	6200	77000	75000	8200	81000	80000
10	99	SJ		29.004	SOUTH LODI	6500	85000	79000	7200	74000	71000

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-001 I-5 SB Ramps-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	I-5 SB Off-Ramp Southbound					Eight Mile Road Westbound					I-5 SB On-Ramp Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	10	0	12	0	22	119	107	0	0	226	0	0	0	0	0	0	104	174	0	278	526	0
07:15	13	0	16	0	29	189	142	0	0	331	0	0	0	0	0	0	81	209	0	290	650	0
07:30	17	0	30	0	47	181	165	0	0	346	0	0	0	0	0	0	110	218	0	328	721	0
07:45	11	0	30	0	41	157	229	0	0	386	0	0	0	0	0	0	100	188	0	288	715	0
Total	51	0	88	0	139	646	643	0	0	1289	0	0	0	0	0	0	395	789	0	1184	2612	0
08:00	5	0	22	0	27	121	248	0	0	369	0	0	0	0	0	0	78	176	0	254	650	0
08:15	13	1	36	0	50	99	233	0	0	332	0	0	0	0	0	0	95	194	0	289	671	0
08:30	16	0	26	0	42	86	207	0	0	293	0	0	0	0	0	0	72	141	0	213	548	0
08:45	11	0	38	0	49	85	188	0	0	273	0	0	0	0	0	0	103	140	0	243	565	0
Total	45	1	122	0	168	391	876	0	0	1267	0	0	0	0	0	0	348	651	0	999	2434	0
16:00	47	1	22	0	70	65	285	0	0	350	0	0	0	0	0	0	120	169	0	289	709	0
16:15	54	0	27	0	81	95	281	0	0	376	0	0	0	0	0	0	132	146	0	278	735	0
16:30	44	0	26	0	70	74	279	0	0	353	0	0	0	0	0	0	174	148	0	322	745	0
16:45	40	0	42	0	82	75	322	0	0	397	0	0	0	0	0	0	127	147	0	274	753	0
Total	185	1	117	0	303	309	1167	0	0	1476	0	0	0	0	0	0	553	610	0	1163	2942	0
17:00	38	1	44	0	83	68	296	0	0	364	0	0	0	0	0	0	166	191	0	357	804	0
17:15	44	0	34	0	78	79	340	0	0	419	0	0	0	0	0	0	125	190	0	315	812	0
17:30	35	0	56	0	91	76	336	0	0	412	0	0	0	0	0	0	158	196	0	354	857	0
17:45	41	0	36	0	77	76	332	0	0	408	0	0	0	0	0	0	128	156	0	284	769	0
Total	158	1	170	0	329	299	1304	0	0	1603	0	0	0	0	0	0	577	733	0	1310	3242	0
Grand Total	439	3	497	0	939	1645	3990	0	0	5635	0	0	0	0	0	0	1873	2783	0	4656	11230	0
Apprch %	46.8%	0.3%	52.9%	0.0%	8.4%	29.2%	70.8%	0.0%	0.0%	50.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.2%	59.8%	0.0%	41.5%	100.0%	0
Total %	3.9%	0.0%	4.4%	0.0%	8.4%	14.6%	35.5%	0.0%	0.0%	50.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	24.8%	0.0%	41.5%	100.0%	0

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-001 I-5 SB Ramps-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	I-5 SB Off-Ramp Southbound					Eight Mile Road Westbound					I-5 SB On-Ramp Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	17	0	30	0	47	181	165	0	0	346	0	0	0	0	0	0	110	218	0	328	721
07:45	11	0	30	0	41	157	229	0	0	386	0	0	0	0	0	0	100	188	0	288	715
08:00	5	0	22	0	27	121	248	0	0	369	0	0	0	0	0	0	78	176	0	254	650
08:15	13	1	36	0	50	99	233	0	0	332	0	0	0	0	0	0	95	194	0	289	671
Total Volume	46	1	118	0	165	558	875	0	0	1433	0	0	0	0	0	0	383	776	0	1159	2757
% App Total	27.9%	0.6%	71.5%	0.0%		38.9%	61.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	33.0%	67.0%	0.0%		
PHF	.676	.250	.819	.000	.825	.771	.882	.000	.000	.928	.000	.000	.000	.000	.000	.000	.870	.890	.000	.883	.956

PM PEAK HOUR	I-5 SB Off-Ramp Southbound					Eight Mile Road Westbound					I-5 SB On-Ramp Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	38	1	44	0	83	68	296	0	0	364	0	0	0	0	0	0	166	191	0	357	804
17:15	44	0	34	0	78	79	340	0	0	419	0	0	0	0	0	0	125	190	0	315	812
17:30	35	0	56	0	91	76	336	0	0	412	0	0	0	0	0	0	158	196	0	354	857
17:45	41	0	36	0	77	76	332	0	0	408	0	0	0	0	0	0	128	156	0	284	769
Total Volume	158	1	170	0	329	299	1304	0	0	1603	0	0	0	0	0	0	577	733	0	1310	3242
% App Total	48.0%	0.3%	51.7%	0.0%		18.7%	81.3%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	44.0%	56.0%	0.0%		
PHF	.898	.250	.759	.000	.904	.946	.959	.000	.000	.956	.000	.000	.000	.000	.000	.000	.869	.935	.000	.917	.946

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-002 I-5 NB Ramps-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	I-5 NB On-Ramp Southbound					Eight Mile Road Westbound					I-5 NB Off-Ramp Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	0	0	0	0	0	174	32	0	206	63	1	121	0	185	18	94	0	0	112	503	0
07:15	0	0	0	0	0	0	245	28	0	273	78	1	72	0	151	29	66	0	0	95	519	0
07:30	0	0	0	0	0	0	240	34	0	274	113	1	76	0	190	25	99	0	0	124	588	0
07:45	0	0	0	0	0	0	252	35	0	287	136	1	75	0	212	27	85	0	0	112	611	0
Total	0	0	0	0	0	0	911	129	0	1040	390	4	344	0	738	99	344	0	0	443	2221	0
08:00	0	0	0	0	0	0	219	24	0	243	146	0	70	0	216	15	67	0	0	82	541	0
08:15	0	0	0	0	0	0	193	25	0	218	144	1	73	0	218	20	87	0	0	107	543	0
08:30	0	0	0	0	0	0	167	16	0	183	121	1	57	0	179	20	71	0	0	91	453	0
08:45	0	0	0	0	0	0	160	23	0	183	117	0	45	0	162	22	87	0	0	109	454	0
Total	0	0	0	0	0	0	739	88	0	827	528	2	245	0	775	77	312	0	0	389	1991	0
16:00	0	0	0	0	0	0	168	21	0	189	187	0	84	0	271	39	126	0	0	165	625	0
16:15	0	0	0	0	0	0	185	22	0	207	193	0	119	0	312	31	150	0	0	181	700	0
16:30	0	0	0	0	0	0	183	20	0	203	178	0	122	0	300	39	168	0	0	207	710	0
16:45	0	0	0	0	0	0	184	23	0	207	197	0	124	0	321	31	135	0	0	166	694	0
Total	0	0	0	0	0	0	720	86	0	806	755	0	449	0	1204	140	579	0	0	719	2729	0
17:00	0	0	0	0	0	0	190	12	0	202	186	0	145	0	331	35	156	0	0	191	724	0
17:15	0	0	0	0	0	0	182	21	0	203	239	0	165	0	404	32	154	0	0	186	793	0
17:30	0	0	0	0	0	0	184	21	0	205	218	0	121	0	339	29	162	0	0	191	735	0
17:45	0	0	0	0	0	0	201	13	0	214	201	0	130	0	331	31	141	0	0	172	717	0
Total	0	0	0	0	0	0	757	67	0	824	844	0	561	0	1405	127	613	0	0	740	2969	0
Grand Total	0	0	0	0	0	0	3127	370	0	3497	2517	6	1599	0	4122	443	1848	0	0	2291	9910	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	89.4%	10.6%	0.0%	35.3%	61.1%	0.1%	38.8%	0.0%	41.6%	19.3%	80.7%	0.0%	0.0%	23.1%	100.0%	
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6%	3.7%	0.0%	35.3%	25.4%	0.1%	16.1%	0.0%	41.6%	4.5%	18.6%	0.0%	0.0%	23.1%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-002 I-5 NB Ramps-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	I-5 NB On-Ramp Southbound					Eight Mile Road Westbound					I-5 NB Off-Ramp Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	0	0	0	0	0	0	240	34	0	274	113	1	76	0	190	25	99	0	0	124	588
07:45	0	0	0	0	0	0	252	35	0	287	136	1	75	0	212	27	85	0	0	112	611
08:00	0	0	0	0	0	0	219	24	0	243	146	0	70	0	216	15	67	0	0	82	541
08:15	0	0	0	0	0	0	193	25	0	218	144	1	73	0	218	20	87	0	0	107	543
Total Volume	0	0	0	0	0	0	904	118	0	1022	539	3	294	0	836	87	338	0	0	425	2283
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.5%	11.5%	0.0%	0.0%	64.5%	0.4%	35.2%	0.0%	0.0%	20.5%	79.5%	0.0%	0.0%	0.0%	
PHF	.000	.000	.000	.000	.000	.000	.897	.843	.000	.890	.923	.750	.967	.000	.959	.806	.854	.000	.000	.857	.934

PM PEAK HOUR	I-5 NB On-Ramp Southbound					Eight Mile Road Westbound					I-5 NB Off-Ramp Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	190	12	0	202	186	0	145	0	331	35	156	0	0	191	724
17:15	0	0	0	0	0	0	182	21	0	203	239	0	165	0	404	32	154	0	0	186	793
17:30	0	0	0	0	0	0	184	21	0	205	218	0	121	0	339	29	162	0	0	191	735
17:45	0	0	0	0	0	0	201	13	0	214	201	0	130	0	331	31	141	0	0	172	717
Total Volume	0	0	0	0	0	0	757	67	0	824	844	0	561	0	1405	127	613	0	0	740	2969
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.9%	8.1%	0.0%	0.0%	60.1%	0.0%	39.9%	0.0%	0.0%	17.2%	82.8%	0.0%	0.0%	0.0%	
PHF	.000	.000	.000	.000	.000	.000	.942	.798	.000	.963	.883	.000	.850	.000	.869	.907	.946	.000	.000	.969	.936

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-003 Thornton Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Thornton Road Southbound					Eight Mile Road Westbound					Thornton Road Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	3	19	15	0	37	63	80	7	0	150	122	27	53	0	202	15	82	83	0	180	569	0
07:15	2	13	43	0	58	28	107	5	0	140	119	35	51	0	205	15	93	21	0	129	532	0
07:30	4	21	43	0	68	20	116	4	0	140	125	23	49	0	197	26	112	30	0	168	573	0
07:45	2	20	39	0	61	31	138	8	0	177	96	28	49	0	173	26	93	30	0	149	560	0
Total	11	73	140	0	224	142	441	24	0	607	462	113	202	0	777	82	380	164	0	626	2234	0
08:00	3	16	29	0	48	33	126	5	0	164	101	33	37	0	171	18	72	40	0	130	513	0
08:15	1	24	23	0	48	30	115	3	0	148	74	20	37	0	131	16	103	40	0	159	486	0
08:30	4	16	17	0	37	21	100	5	0	126	64	24	32	0	120	8	75	29	0	112	395	0
08:45	2	16	22	0	40	19	95	2	0	116	55	25	27	0	107	20	77	38	0	135	398	0
Total	10	72	91	0	173	103	436	15	0	554	294	102	133	0	529	62	327	147	0	536	1792	0
16:00	5	30	18	0	53	50	115	11	0	176	55	20	23	0	98	15	123	56	0	194	521	0
16:15	6	34	23	0	63	31	130	6	0	167	59	19	31	0	109	22	148	75	0	245	584	0
16:30	15	29	18	0	62	42	135	5	0	182	53	16	33	0	102	19	164	81	0	264	610	0
16:45	8	41	25	0	74	44	135	3	0	182	55	16	21	0	92	20	152	68	0	240	588	0
Total	34	134	84	0	252	167	515	25	0	707	222	71	108	0	401	76	587	280	0	943	2303	0
17:00	9	33	24	0	66	37	111	4	0	152	62	13	35	0	110	25	166	63	0	254	582	0
17:15	13	44	25	0	82	44	137	3	0	184	42	20	39	0	101	34	133	79	0	246	613	0
17:30	7	27	22	0	56	40	131	2	0	173	68	20	28	0	116	21	174	78	0	273	618	0
17:45	6	35	24	0	65	50	114	2	0	166	63	11	22	0	96	18	146	71	0	235	562	0
Total	35	139	95	0	269	171	493	11	0	675	235	64	124	0	423	98	619	291	0	1008	2375	0
Grand Total	90	418	410	0	918	583	1885	75	0	2543	1213	350	567	0	2130	318	1913	882	0	3113	8704	0
Apprch %	9.8%	45.5%	44.7%	0.0%		22.9%	74.1%	2.9%	0.0%		56.9%	16.4%	26.6%	0.0%		10.2%	61.5%	28.3%	0.0%			
Total %	1.0%	4.8%	4.7%	0.0%	10.5%	6.7%	21.7%	0.9%	0.0%	29.2%	13.9%	4.0%	6.5%	0.0%	24.5%	3.7%	22.0%	10.1%	0.0%	35.8%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-003 Thornton Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Thornton Road Southbound					Eight Mile Road Westbound					Thornton Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 07:00 to 08:00																						
Peak Hour For Entire Intersection Begins at 07:00																						
07:00	3	19	15	0	37	63	80	7	0	150	122	27	53	0	202	15	82	83	0	180	569	
07:15	2	13	43	0	58	28	107	5	0	140	119	35	51	0	205	15	93	21	0	129	532	
07:30	4	21	43	0	68	20	116	4	0	140	125	23	49	0	197	26	112	30	0	168	573	
07:45	2	20	39	0	61	31	138	8	0	177	96	28	49	0	173	26	93	30	0	149	560	
Total Volume	11	73	140	0	224	142	441	24	0	607	462	113	202	0	777	82	380	164	0	626	2234	
% App Total	4.9%	32.6%	62.5%	0.0%		23.4%	72.7%	4.0%	0.0%		59.5%	14.5%	26.0%	0.0%		13.1%	60.7%	26.2%	0.0%			
PHF	.688	.869	.814	.000	.824	.563	.799	.750	.000	.857	.924	.807	.953	.000	.948	.788	.848	.494	.000	.869	.975	

PM PEAK HOUR	Thornton Road Southbound					Eight Mile Road Westbound					Thornton Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	8	41	25	0	74	44	135	3	0	182	55	16	21	0	92	20	152	68	0	240	588	
17:00	9	33	24	0	66	37	111	4	0	152	62	13	35	0	110	25	166	63	0	254	582	
17:15	13	44	25	0	82	44	137	3	0	184	42	20	39	0	101	34	133	79	0	246	613	
17:30	7	27	22	0	56	40	131	2	0	173	68	20	28	0	116	21	174	78	0	273	618	
Total Volume	37	145	96	0	278	165	514	12	0	691	227	69	123	0	419	100	625	288	0	1013	2401	
% App Total	13.3%	52.2%	34.5%	0.0%		23.9%	74.4%	1.7%	0.0%		54.2%	16.5%	29.4%	0.0%		9.9%	61.7%	28.4%	0.0%			
PHF	.712	.824	.960	.000	.848	.938	.938	.750	.000	.939	.835	.863	.788	.000	.903	.735	.898	.911	.000	.928	.971	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-004 Davis Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Davis Road Southbound					Eight Mile Road Westbound					Davis Road Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	1	20	9	0	30	14	99	3	0	116	26	26	36	0	88	13	121	15	0	149	383	0
07:15	3	48	7	0	58	33	72	1	0	106	27	23	55	0	105	17	136	16	0	169	438	0
07:30	0	58	5	0	63	45	95	4	0	144	37	62	31	0	130	16	142	20	0	178	515	0
07:45	1	47	12	0	60	39	112	1	0	152	32	34	48	0	114	15	117	21	0	153	479	0
Total	5	173	33	0	211	131	378	9	0	518	122	145	170	0	437	61	516	72	0	649	1815	0
08:00	3	17	12	0	32	24	133	2	0	159	23	26	36	0	85	14	107	14	0	135	411	0
08:15	5	19	7	0	31	25	105	3	0	133	27	20	23	0	70	16	137	8	0	161	395	0
08:30	1	12	6	0	19	17	83	1	0	101	29	23	57	0	109	9	98	10	0	117	346	0
08:45	4	21	13	0	38	16	86	1	0	103	12	18	26	0	56	13	100	14	0	127	324	0
Total	13	69	38	0	120	82	407	7	0	496	91	87	142	0	320	52	442	46	0	540	1476	0
16:00	4	24	12	0	40	37	167	3	0	207	17	24	33	0	74	7	119	31	0	157	478	0
16:15	2	23	16	0	41	33	140	0	0	173	16	23	30	0	69	15	139	19	0	173	456	0
16:30	6	29	21	0	56	26	137	0	0	163	23	15	26	0	64	14	158	27	0	199	482	0
16:45	2	29	20	0	51	35	154	5	0	194	13	15	18	0	46	11	125	19	0	155	446	0
Total	14	105	69	0	188	131	598	8	0	737	69	77	107	0	253	47	541	96	0	684	1862	0
17:00	4	42	13	0	59	28	155	2	0	185	9	27	17	0	53	12	164	28	0	204	501	0
17:15	3	29	10	0	42	31	152	1	0	184	19	29	34	0	82	8	161	23	0	192	500	0
17:30	4	31	15	0	50	36	148	2	0	186	21	29	30	0	80	15	147	26	0	188	504	0
17:45	3	33	15	0	51	22	144	1	0	167	17	27	23	0	67	13	119	34	0	166	451	0
Total	14	135	53	0	202	117	599	6	0	722	66	112	104	0	282	48	591	111	0	750	1956	0
Grand Total	46	482	193	0	721	461	1982	30	0	2473	348	421	523	0	1292	208	2090	325	0	2623	7109	0
Apprch %	6.4%	66.9%	26.8%	0.0%		18.6%	80.1%	1.2%	0.0%		26.9%	32.6%	40.5%	0.0%		7.9%	79.7%	12.4%	0.0%			
Total %	0.6%	6.8%	2.7%	0.0%	10.1%	6.5%	27.9%	0.4%	0.0%	34.8%	4.9%	5.9%	7.4%	0.0%	18.2%	2.9%	29.4%	4.6%	0.0%	36.9%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-004 Davis Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Davis Road Southbound					Eight Mile Road Westbound					Davis Road Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	3	48	7	0	58	33	72	1	0	106	27	23	55	0	105	17	136	16	0	169	438
07:30	0	58	5	0	63	45	95	4	0	144	37	62	31	0	130	16	142	20	0	178	515
07:45	1	47	12	0	60	39	112	1	0	152	32	34	48	0	114	15	117	21	0	153	479
08:00	3	17	12	0	32	24	133	2	0	159	23	26	36	0	85	14	107	14	0	135	411
Total Volume	7	170	36	0	213	141	412	8	0	561	119	145	170	0	434	62	502	71	0	635	1843
% App Total	3.3%	79.8%	16.9%	0.0%		25.1%	73.4%	1.4%	0.0%		27.4%	33.4%	39.2%	0.0%		9.8%	79.1%	11.2%	0.0%		
PHF	.583	.733	.750	.000	.845	.783	.774	.500	.000	.882	.804	.585	.773	.000	.835	.912	.884	.845	.000	.892	.895

PM PEAK HOUR	Davis Road Southbound					Eight Mile Road Westbound					Davis Road Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	4	42	13	0	59	28	155	2	0	185	9	27	17	0	53	12	164	28	0	204	501
17:15	3	29	10	0	42	31	152	1	0	184	19	29	34	0	82	8	161	23	0	192	500
17:30	4	31	15	0	50	36	148	2	0	186	21	29	30	0	80	15	147	26	0	188	504
17:45	3	33	15	0	51	22	144	1	0	167	17	27	23	0	67	13	119	34	0	166	451
Total Volume	14	135	53	0	202	117	599	6	0	722	66	112	104	0	282	48	591	111	0	750	1956
% App Total	6.9%	66.8%	26.2%	0.0%		16.2%	83.0%	0.8%	0.0%		23.4%	39.7%	36.9%	0.0%		6.4%	78.8%	14.8%	0.0%		
PHF	.875	.804	.883	.000	.856	.813	.966	.750	.000	.970	.786	.966	.765	.000	.860	.800	.901	.816	.000	.919	.970

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-008 Lower Sacramento Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Lower Sacramento Road Southbound					Eight Mile Road Westbound					Lower Sacramento Road Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	12	72	11	0	95	37	99	2	0	138	4	57	65	0	126	17	150	2	0	169	528	0
07:15	11	76	16	0	103	51	85	6	0	142	6	43	64	0	113	17	170	5	0	192	550	0
07:30	6	94	19	0	119	37	119	8	0	164	6	74	84	0	164	17	168	5	0	190	637	0
07:45	9	107	23	0	139	51	119	9	0	179	7	79	76	0	162	19	158	2	0	179	659	0
Total	38	349	69	0	456	176	422	25	0	623	23	253	289	0	565	70	646	14	0	730	2374	0
08:00	14	93	24	0	131	70	126	13	0	209	12	62	50	0	124	18	132	4	0	154	618	0
08:15	7	99	17	0	123	51	100	9	0	160	14	52	63	0	129	17	130	7	0	154	566	0
08:30	14	60	12	0	86	38	92	9	0	139	3	51	43	0	97	27	151	3	0	181	503	0
08:45	6	64	10	0	80	59	87	10	0	156	3	28	40	0	71	26	103	2	0	131	438	0
Total	41	316	63	0	420	218	405	41	0	664	32	193	196	0	421	88	516	16	0	620	2125	0
16:00	10	91	24	0	125	56	166	15	0	237	19	65	50	0	134	13	133	10	0	156	652	0
16:15	13	87	16	0	116	64	148	5	0	217	4	82	60	0	146	22	137	5	0	164	643	0
16:30	12	69	20	0	101	60	163	5	0	228	11	76	58	0	145	17	143	10	0	170	644	0
16:45	8	90	19	0	117	67	153	8	0	228	11	89	51	0	151	17	136	8	0	161	657	0
Total	43	337	79	0	459	247	630	33	0	910	45	312	219	0	576	69	549	33	0	651	2596	0
17:00	13	88	25	0	126	65	166	5	0	236	11	79	62	0	152	21	149	3	0	173	687	0
17:15	9	68	25	0	102	70	157	7	0	234	12	95	64	0	171	19	157	2	0	178	685	0
17:30	10	83	23	0	116	59	166	7	0	232	8	95	55	0	158	23	141	6	0	170	676	0
17:45	7	71	13	0	91	51	148	8	0	207	14	78	56	0	148	22	137	6	0	165	611	0
Total	39	310	86	0	435	245	637	27	0	909	45	347	237	0	629	85	584	17	0	686	2659	0
Grand Total	161	1312	297	0	1770	886	2094	126	0	3106	145	1105	941	0	2191	312	2295	80	0	2687	9754	0
Apprch %	9.1%	74.1%	16.8%	0.0%		28.5%	67.4%	4.1%	0.0%		6.6%	50.4%	42.9%	0.0%		11.6%	85.4%	3.0%	0.0%			
Total %	1.7%	13.5%	3.0%	0.0%	18.1%	9.1%	21.5%	1.3%	0.0%	31.8%	1.5%	11.3%	9.6%	0.0%	22.5%	3.2%	23.5%	0.8%	0.0%	27.5%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-008 Lower Sacramento Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Lower Sacramento Road Southbound					Eight Mile Road Westbound					Lower Sacramento Road Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	6	94	19	0	119	37	119	8	0	164	6	74	84	0	164	17	168	5	0	190	637
07:45	9	107	23	0	139	51	119	9	0	179	7	79	76	0	162	19	158	2	0	179	659
08:00	14	93	24	0	131	70	126	13	0	209	12	62	50	0	124	18	132	4	0	154	618
08:15	7	99	17	0	123	51	100	9	0	160	14	52	63	0	129	17	130	7	0	154	566
Total Volume	36	393	83	0	512	209	464	39	0	712	39	267	273	0	579	71	588	18	0	677	2480
% App Total	7.0%	76.8%	16.2%	0.0%		29.4%	65.2%	5.5%	0.0%		6.7%	46.1%	47.2%	0.0%		10.5%	86.9%	2.7%	0.0%		
PHF	.643	.918	.865	.000	.921	.746	.921	.750	.000	.852	.696	.845	.813	.000	.883	.934	.875	.643	.000	.891	.941

PM PEAK HOUR	Lower Sacramento Road Southbound					Eight Mile Road Westbound					Lower Sacramento Road Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	8	90	19	0	117	67	153	8	0	228	11	89	51	0	151	17	136	8	0	161	657
17:00	13	88	25	0	126	65	166	5	0	236	11	79	62	0	152	21	149	3	0	173	687
17:15	9	68	25	0	102	70	157	7	0	234	12	95	64	0	171	19	157	2	0	178	685
17:30	10	83	23	0	116	59	166	7	0	232	8	95	55	0	158	23	141	6	0	170	676
Total Volume	40	329	92	0	461	261	642	27	0	930	42	358	232	0	632	80	583	19	0	682	2705
% App Total	8.7%	71.4%	20.0%	0.0%		28.1%	69.0%	2.9%	0.0%		6.6%	56.6%	36.7%	0.0%		11.7%	85.5%	2.8%	0.0%		
PHF	.769	.914	.920	.000	.915	.932	.967	.844	.000	.985	.875	.942	.906	.000	.924	.870	.928	.594	.000	.958	.984

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-022 West Lane-Armstrong Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					Armstrong Road Westbound					West Lane Northbound					Armstrong Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	30	74	9	1	114	6	19	50	0	75	0	70	12	0	82	10	21	1	0	32	303	1
07:15	41	111	3	0	155	13	23	15	0	51	0	76	15	0	91	3	43	0	0	46	343	0
07:30	40	156	12	5	213	7	20	17	0	44	3	96	21	0	120	10	37	2	0	49	426	5
07:45	43	108	5	0	156	10	31	25	0	66	1	101	17	0	119	20	50	0	0	70	411	0
Total	154	449	29	6	638	36	93	107	0	236	4	343	65	0	412	43	151	3	0	197	1483	6
08:00	35	108	16	2	161	18	19	20	0	57	0	81	9	0	90	16	36	3	0	55	363	2
08:15	38	96	4	2	140	20	21	21	0	62	1	86	18	0	105	8	24	1	0	33	340	2
08:30	19	86	4	1	110	7	17	10	0	34	0	98	14	0	112	4	22	1	0	27	283	1
08:45	13	63	7	0	83	6	19	13	0	38	0	96	17	0	113	10	21	0	0	31	265	0
Total	105	353	31	5	494	51	76	64	0	191	1	361	58	0	420	38	103	5	0	146	1251	5
16:00	25	97	11	4	137	10	42	31	0	83	3	103	7	0	113	8	26	3	0	37	370	4
16:15	12	86	7	2	107	11	33	33	0	77	2	115	9	0	126	9	15	0	0	24	334	2
16:30	27	102	9	11	149	21	57	26	0	104	1	131	6	0	138	4	17	3	0	24	415	11
16:45	25	102	11	2	140	14	44	37	0	95	1	137	9	0	147	9	11	0	0	20	402	2
Total	89	387	38	19	533	56	176	127	0	359	7	486	31	0	524	30	69	6	0	105	1521	19
17:00	21	117	10	3	151	15	52	48	0	115	1	122	5	0	128	7	18	0	0	25	419	3
17:15	22	120	10	1	153	12	44	61	0	117	0	150	13	0	163	12	12	1	0	25	458	1
17:30	17	96	11	3	127	19	39	31	0	89	3	136	8	0	147	7	9	0	0	16	379	3
17:45	13	95	6	2	116	11	33	32	0	76	1	131	3	0	135	8	20	2	0	30	357	2
Total	73	428	37	9	547	57	168	172	0	397	5	539	29	0	573	34	59	3	0	96	1613	9
Grand Total	421	1617	135	39	2212	200	513	470	0	1183	17	1729	183	0	1929	145	382	17	0	544	5868	39
Apprch %	19.0%	73.1%	6.1%	1.8%		16.9%	43.4%	39.7%	0.0%		0.9%	89.6%	9.5%	0.0%		26.7%	70.2%	3.1%	0.0%			
Total %	7.2%	27.6%	2.3%	0.7%	37.7%	3.4%	8.7%	8.0%	0.0%	20.2%	0.3%	29.5%	3.1%	0.0%	32.9%	2.5%	6.5%	0.3%	0.0%	9.3%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-022 West Lane-Armstrong Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					Armstrong Road Westbound					West Lane Northbound					Armstrong Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	41	111	3	0	155	13	23	15	0	51	0	76	15	0	91	3	43	0	0	46	343
07:30	40	156	12	5	213	7	20	17	0	44	3	96	21	0	120	10	37	2	0	49	426
07:45	43	108	5	0	156	10	31	25	0	66	1	101	17	0	119	20	50	0	0	70	411
08:00	35	108	16	2	161	18	19	20	0	57	0	81	9	0	90	16	36	3	0	55	363
Total Volume	159	483	36	7	685	48	93	77	0	218	4	354	62	0	420	49	166	5	0	220	1543
% App Total	23.2%	70.5%	5.3%	1.0%		22.0%	42.7%	35.3%	0.0%		1.0%	84.3%	14.8%	0.0%		22.3%	75.5%	2.3%	0.0%		
PHF	.924	.774	.563	.350	.804	.667	.750	.770	.000	.826	.333	.876	.738	.000	.875	.613	.830	.417	.000	.786	.906

PM PEAK HOUR	West Lane Southbound					Armstrong Road Westbound					West Lane Northbound					Armstrong Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	27	102	9	11	149	21	57	26	0	104	1	131	6	0	138	4	17	3	0	24	415
16:45	25	102	11	2	140	14	44	37	0	95	1	137	9	0	147	9	11	0	0	20	402
17:00	21	117	10	3	151	15	52	48	0	115	1	122	5	0	128	7	18	0	0	25	419
17:15	22	120	10	1	153	12	44	61	0	117	0	150	13	0	163	12	12	1	0	25	458
Total Volume	95	441	40	17	593	62	197	172	0	431	3	540	33	0	576	32	58	4	0	94	1694
% App Total	16.0%	74.4%	6.7%	2.9%		14.4%	45.7%	39.9%	0.0%		0.5%	93.8%	5.7%	0.0%		34.0%	61.7%	4.3%	0.0%		
PHF	.880	.919	.909	.386	.969	.738	.864	.705	.000	.921	.750	.900	.635	.000	.883	.667	.806	.333	.000	.940	.925

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-020 Ham Lane-West Lane.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Ham Lane Southbound					West Lane Westbound					Ham Lane Northbound					West Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	1	0	6	0	7	0	79	0	0	79	1	1	2	0	4	1	81	0	0	82	172	0
07:15	1	3	4	0	8	1	118	1	0	120	1	2	1	0	4	1	87	0	0	88	220	0
07:30	1	3	20	0	24	2	151	1	0	154	3	1	4	0	8	1	113	0	0	114	300	0
07:45	0	3	18	0	21	2	138	0	0	140	6	2	3	0	11	5	120	0	0	125	297	0
Total	3	9	48	0	60	5	486	2	0	493	11	6	10	0	27	8	401	0	0	409	989	0
08:00	0	2	11	0	13	3	121	1	0	125	0	2	5	0	7	5	90	0	0	95	240	0
08:15	3	0	5	0	8	3	114	2	0	119	0	0	5	0	5	2	90	0	0	92	224	0
08:30	0	3	5	0	8	2	77	2	0	81	0	2	2	0	4	2	112	0	0	114	207	0
08:45	0	1	5	0	6	3	83	1	0	87	0	1	3	0	4	2	106	0	0	108	205	0
Total	3	6	26	0	35	11	395	6	0	412	0	5	15	0	20	11	398	0	0	409	876	0
16:00	0	0	0	0	0	1	106	1	0	108	1	1	3	0	5	7	110	0	0	117	230	0
16:15	0	1	1	0	2	3	93	2	0	98	0	2	2	0	4	6	131	0	0	137	241	0
16:30	0	2	3	0	5	2	115	1	0	118	0	1	1	0	2	3	138	1	0	142	267	0
16:45	0	0	3	0	3	0	120	3	1	124	0	5	5	0	10	6	141	1	0	148	285	1
Total	0	3	7	0	10	6	434	7	1	448	1	9	11	0	21	22	520	2	0	544	1023	1
17:00	2	0	2	0	4	4	125	1	0	130	0	0	1	0	1	9	144	1	0	154	289	0
17:15	2	2	1	0	5	3	133	2	0	138	0	2	4	0	6	11	137	0	0	148	297	0
17:30	0	1	4	0	5	2	108	2	0	112	0	1	2	0	3	5	146	0	0	151	271	0
17:45	0	0	2	0	2	1	112	0	0	113	0	1	1	0	2	8	129	0	0	137	254	0
Total	4	3	9	0	16	10	478	5	0	493	0	4	8	0	12	33	556	1	0	590	1111	0
Grand Total	10	21	90	0	121	32	1793	20	1	1846	12	24	44	0	80	74	1875	3	0	1952	3999	1
Apprch %	8.3%	17.4%	74.4%	0.0%		1.7%	97.1%	1.1%	0.1%		15.0%	30.0%	55.0%	0.0%		3.8%	96.1%	0.2%	0.0%			
Total %	0.3%	0.5%	2.3%	0.0%	3.0%	0.8%	44.8%	0.5%	0.0%	46.2%	0.3%	0.6%	1.1%	0.0%	2.0%	1.9%	46.9%	0.1%	0.0%	48.8%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-020 Ham Lane-West Lane.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Ham Lane Southbound					West Lane Westbound					Ham Lane Northbound					West Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	1	3	20	0	24	2	151	1	0	154	3	1	4	0	8	1	113	0	0	114	300
07:45	0	3	18	0	21	2	138	0	0	140	6	2	3	0	11	5	120	0	0	125	297
08:00	0	2	11	0	13	3	121	1	0	125	0	2	5	0	7	5	90	0	0	95	240
08:15	3	0	5	0	8	3	114	2	0	119	0	0	5	0	5	2	90	0	0	92	224
Total Volume	4	8	54	0	66	10	524	4	0	538	9	5	17	0	31	13	413	0	0	426	1061
% App Total	6.1%	12.1%	81.8%	0.0%		1.9%	97.4%	0.7%	0.0%		29.0%	16.1%	54.8%	0.0%		3.1%	96.9%	0.0%	0.0%		
PHF	.333	.667	.675	.000	.688	.833	.868	.500	.000	.873	.375	.625	.850	.000	.705	.650	.860	.000	.000	.852	.884

PM PEAK HOUR	Ham Lane Southbound					West Lane Westbound					Ham Lane Northbound					West Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	3	0	3	0	120	3	1	124	0	5	5	0	10	6	141	1	0	148	285
17:00	2	0	2	0	4	4	125	1	0	130	0	0	1	0	1	9	144	1	0	154	289
17:15	2	2	1	0	5	3	133	2	0	138	0	2	4	0	6	11	137	0	0	148	297
17:30	0	1	4	0	5	2	108	2	0	112	0	1	2	0	3	5	146	0	0	151	271
Total Volume	4	3	10	0	17	9	486	8	1	504	0	8	12	0	20	31	568	2	0	601	1142
% App Total	23.5%	17.6%	58.8%	0.0%		1.8%	96.4%	1.6%	0.2%		0.0%	40.0%	60.0%	0.0%		5.2%	94.5%	0.3%	0.0%		
PHF	.500	.375	.625	.000	.850	.563	.914	.667	.250	.913	.000	.400	.600	.000	.500	.705	.973	.500	.000	.976	.961

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-021 West Lane-Eight Mile Road.ppd

Date : 5/6/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					Eight Mile Road Westbound					West Lane Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	50	28	0	78	10	76	3	0	89	44	48	10	0	102	28	124	63	0	215	484	0
07:15	2	80	23	1	106	17	61	2	0	80	43	60	10	2	115	33	119	91	0	243	544	3
07:30	5	135	24	3	167	18	87	1	0	106	66	68	11	0	145	45	126	92	0	263	681	3
07:45	6	147	29	5	187	31	80	5	0	116	60	90	19	0	169	34	102	81	0	217	689	5
Total	13	412	104	9	538	76	304	11	0	391	213	266	50	2	531	140	471	327	0	938	2398	11
08:00	2	80	38	3	123	23	99	1	0	123	76	58	18	0	152	25	109	88	0	222	620	3
08:15	4	96	29	0	129	22	62	0	0	84	62	78	11	0	151	26	83	81	0	190	554	0
08:30	1	53	28	1	83	15	73	3	0	91	43	75	18	0	136	38	108	69	0	215	525	1
08:45	2	51	43	1	97	16	68	1	0	85	45	63	18	0	126	32	65	55	0	152	460	1
Total	9	280	138	5	432	76	302	5	0	383	226	274	65	0	565	121	365	293	0	779	2159	5
16:00	2	78	32	1	113	17	127	1	0	145	58	96	21	1	176	20	94	62	0	176	610	2
16:15	1	65	27	1	94	11	115	1	0	127	68	89	10	0	167	38	118	66	0	222	610	1
16:30	1	81	29	1	112	21	119	1	0	141	82	99	19	0	200	45	93	66	0	204	657	1
16:45	6	75	39	0	120	12	130	3	0	145	80	104	18	1	203	37	113	65	0	215	683	1
Total	10	299	127	3	439	61	491	6	0	558	288	388	68	2	746	140	418	259	0	817	2560	5
17:00	1	89	28	3	121	22	136	0	0	158	79	106	18	0	203	40	99	69	0	208	690	3
17:15	1	112	33	1	147	17	124	0	0	141	78	88	17	1	184	56	107	89	0	252	724	2
17:30	1	67	33	0	101	14	113	0	0	127	99	117	25	0	241	42	94	74	0	210	679	0
17:45	2	91	31	0	124	9	78	1	0	88	80	98	18	2	198	33	92	68	0	193	603	2
Total	5	359	125	4	493	62	451	1	0	514	336	409	78	3	826	171	392	300	0	863	2696	7
Grand Total	37	1350	494	21	1902	275	1548	23	0	1846	1063	1337	261	7	2668	572	1646	1179	0	3397	9813	28
Apprch %	1.9%	71.0%	26.0%	1.1%		14.9%	83.9%	1.2%	0.0%		39.8%	50.1%	9.8%	0.3%		16.8%	48.5%	34.7%	0.0%			
Total %	0.4%	13.8%	5.0%	0.2%	19.4%	2.8%	15.8%	0.2%	0.0%	18.8%	10.8%	13.6%	2.7%	0.1%	27.2%	5.8%	16.8%	12.0%	0.0%	34.6%	100.0%	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-021 West Lane-Eight Mile Road.ppd

Date : 5/6/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					Eight Mile Road Westbound					West Lane Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	5	135	24	3	167	18	87	1	0	106	66	68	11	0	145	45	126	92	0	263	681
07:45	6	147	29	5	187	31	80	5	0	116	60	90	19	0	169	34	102	81	0	217	689
08:00	2	80	38	3	123	23	99	1	0	123	76	58	18	0	152	25	109	88	0	222	620
08:15	4	96	29	0	129	22	62	0	0	84	62	78	11	0	151	26	83	81	0	190	554
Total Volume	17	458	120	11	606	94	328	7	0	429	264	294	59	0	617	130	420	342	0	892	2544
% App Total	2.8%	75.6%	19.8%	1.8%		21.9%	76.5%	1.6%	0.0%		42.8%	47.6%	9.6%	0.0%		14.6%	47.1%	38.3%	0.0%		
PHF	.708	.779	.789	.550	.810	.758	.828	.350	.000	.872	.868	.817	.776	.000	.913	.722	.833	.929	.000	.848	.923

PM PEAK HOUR	West Lane Southbound					Eight Mile Road Westbound					West Lane Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	6	75	39	0	120	12	130	3	0	145	80	104	18	1	203	37	113	65	0	215	683
17:00	1	89	28	3	121	22	136	0	0	158	79	106	18	0	203	40	99	69	0	208	690
17:15	1	112	33	1	147	17	124	0	0	141	78	88	17	1	184	56	107	89	0	252	724
17:30	1	67	33	0	101	14	113	0	0	127	99	117	25	0	241	42	94	74	0	210	679
Total Volume	9	343	133	4	489	65	503	3	0	571	336	415	78	2	831	175	413	297	0	885	2776
% App Total	1.8%	70.1%	27.2%	0.8%		11.4%	88.1%	0.5%	0.0%		40.4%	49.9%	9.4%	0.2%		19.8%	46.7%	33.6%	0.0%		
PHF	.375	.766	.853	.333	.832	.739	.925	.250	.000	.903	.848	.887	.780	.500	.862	.781	.914	.834	.000	.878	.959

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-027 Ham Lane-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Ham Lane Southbound					Eight Mile Road Westbound					Ham Lane Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	2	0	2	0	4	0	81	7	0	88	0	0	0	0	0	1	126	0	0	127	219	0
07:15	3	0	1	0	4	0	80	5	0	85	0	0	0	0	0	2	135	0	0	137	226	0
07:30	8	0	3	0	11	0	105	5	0	110	0	0	0	0	0	1	140	0	0	141	262	0
07:45	4	0	4	0	8	0	119	7	0	126	0	0	0	0	0	4	125	0	0	129	263	0
Total	17	0	10	0	27	0	385	24	0	409	0	0	0	0	0	8	526	0	0	534	970	0
08:00	2	0	1	0	3	0	117	3	0	120	0	0	0	0	0	1	115	0	0	116	239	0
08:15	1	0	5	0	6	0	81	1	0	82	0	0	0	0	0	0	107	0	0	107	195	0
08:30	4	0	2	0	6	0	91	2	0	93	0	0	0	0	0	2	114	0	0	116	215	0
08:45	3	0	0	0	3	0	77	2	0	79	0	0	0	0	0	2	88	0	0	90	172	0
Total	10	0	8	0	18	0	366	8	0	374	0	0	0	0	0	5	424	0	0	429	821	0
16:00	4	0	3	0	7	1	145	4	0	150	0	0	0	0	0	2	111	0	0	113	270	0
16:15	1	0	3	0	4	0	129	6	0	135	0	0	0	0	0	0	133	0	0	133	272	0
16:30	5	0	5	0	10	0	158	2	0	160	0	0	0	0	0	1	103	0	0	104	274	0
16:45	1	0	2	0	3	0	135	6	0	141	0	0	0	0	0	3	138	0	0	141	285	0
Total	11	0	13	0	24	1	567	18	0	586	0	0	0	0	0	6	485	0	0	491	1101	0
17:00	2	0	3	0	5	0	137	2	0	139	0	0	0	0	0	1	116	0	0	117	261	0
17:15	4	0	2	0	6	0	142	2	0	144	0	0	0	0	0	2	119	0	0	121	271	0
17:30	2	0	3	0	5	0	112	2	0	114	0	0	0	0	0	3	121	0	0	124	243	0
17:45	1	0	0	0	1	0	105	2	0	107	0	0	0	0	0	3	115	0	0	118	226	0
Total	9	0	8	0	17	0	496	8	0	504	0	0	0	0	0	9	471	0	0	480	1001	0
Grand Total	47	0	39	0	86	1	1814	58	0	1873	0	0	0	0	0	28	1906	0	0	1934	3893	0
Apprch %	54.7%	0.0%	45.3%	0.0%		0.1%	96.8%	3.1%	0.0%		0.0%	0.0%	0.0%	0.0%		1.4%	98.6%	0.0%	0.0%			
Total %	1.2%	0.0%	1.0%	0.0%	2.2%	0.0%	46.6%	1.5%	0.0%	48.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	49.0%	0.0%	0.0%	49.7%	100.0%	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-027 Ham Lane-Eight Mile Road.ppd

Date : 5/6/2015

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

Unshifted Count = All Vehicles

AM PEAK HOUR	Ham Lane Southbound					Eight Mile Road Westbound					Ham Lane Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	3	0	1	0	4	0	80	5	0	85	0	0	0	0	0	2	135	0	0	137	226
07:30	8	0	3	0	11	0	105	5	0	110	0	0	0	0	0	1	140	0	0	141	262
07:45	4	0	4	0	8	0	119	7	0	126	0	0	0	0	0	4	125	0	0	129	263
08:00	2	0	1	0	3	0	117	3	0	120	0	0	0	0	0	1	115	0	0	116	239
Total Volume	17	0	9	0	26	0	421	20	0	441	0	0	0	0	0	8	515	0	0	523	990
% App Total	65.4%	0.0%	34.6%	0.0%		0.0%	95.5%	4.5%	0.0%		0.0%	0.0%	0.0%	0.0%		1.5%	98.5%	0.0%	0.0%		
PHF	.531	.000	.563	.000	.591	.000	.884	.714	.000	.875	.000	.000	.000	.000	.000	.500	.920	.000	.000	.927	.941

PM PEAK HOUR	Ham Lane Southbound					Eight Mile Road Westbound					Ham Lane Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	4	0	3	0	7	1	145	4	0	150	0	0	0	0	0	2	111	0	0	113	270
16:15	1	0	3	0	4	0	129	6	0	135	0	0	0	0	0	0	133	0	0	133	272
16:30	5	0	5	0	10	0	158	2	0	160	0	0	0	0	0	1	103	0	0	104	274
16:45	1	0	2	0	3	0	135	6	0	141	0	0	0	0	0	3	138	0	0	141	285
Total Volume	11	0	13	0	24	1	567	18	0	586	0	0	0	0	0	6	485	0	0	491	1101
% App Total	45.8%	0.0%	54.2%	0.0%		0.2%	96.8%	3.1%	0.0%		0.0%	0.0%	0.0%	0.0%		1.2%	98.8%	0.0%	0.0%		
PHF	.550	.000	.650	.000	.600	.250	.897	.750	.000	.916	.000	.000	.000	.000	.000	.500	.879	.000	.000	.871	.966

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-029 Leach (Pearson) Road-Eight Mile Road.ppd

Date : 5/12/2015

Unshifted Count = All Vehicles

START TIME	Leach (Pearson) Road Southbound					Eight Mile Road Westbound					Leach (Pearson) Road Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	149	0	0	149	227	0
07:15	0	0	0	0	0	0	101	0	0	101	0	0	0	0	0	0	158	0	0	158	259	0
07:30	0	0	0	0	0	0	121	1	0	122	0	0	0	0	0	0	134	0	0	134	256	0
07:45	0	0	0	0	0	0	135	0	0	135	0	0	0	0	0	0	167	0	0	167	302	0
Total	0	0	0	0	0	0	435	1	0	436	0	0	0	0	0	0	608	0	0	608	1044	0
08:00	0	0	0	0	0	0	93	0	0	93	0	0	0	0	0	0	125	2	0	127	220	0
08:15	0	0	0	0	0	0	92	0	0	92	0	0	0	0	0	0	104	0	0	104	196	0
08:30	0	0	0	0	0	0	107	2	0	109	0	0	1	0	1	0	137	0	0	137	247	0
08:45	0	0	1	0	1	1	125	0	0	126	0	0	0	0	0	0	106	0	0	106	233	0
Total	0	0	1	0	1	1	417	2	0	420	0	0	1	0	1	0	472	2	0	474	896	0
16:00	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	1	103	0	0	104	243	0
16:15	0	0	1	0	1	0	141	0	0	141	0	0	0	0	0	0	102	0	0	102	244	0
16:30	0	0	0	0	0	0	143	1	0	144	0	0	0	0	0	0	104	0	0	104	248	0
16:45	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	1	134	0	0	135	274	0
Total	0	0	1	0	1	0	562	1	0	563	0	0	0	0	0	2	443	0	0	445	1009	0
17:00	0	0	0	0	0	0	137	0	0	137	0	0	0	0	0	0	90	0	0	90	227	0
17:15	0	0	0	0	0	0	154	0	0	154	1	0	0	0	1	0	107	0	0	107	262	0
17:30	0	0	0	0	0	0	142	0	0	142	0	0	0	0	0	0	125	0	0	125	267	0
17:45	0	0	0	0	0	0	135	0	0	135	0	0	0	1	1	0	120	0	0	120	256	1
Total	0	0	0	0	0	0	568	0	0	568	1	0	0	1	2	0	442	0	0	442	1012	1
Grand Total	0	0	2	0	2	1	1982	4	0	1987	1	0	1	1	3	2	1965	2	0	1969	3961	1
Apprch %	0.0%	0.0%	100.0%	0.0%		0.1%	99.7%	0.2%	0.0%		33.3%	0.0%	33.3%	33.3%		0.1%	99.8%	0.1%	0.0%			
Total %	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	50.0%	0.1%	0.0%	50.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	49.6%	0.1%	0.0%	49.7%	100.0%	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-029 Leach (Pearson) Road-Eight Mile Road.ppd

Date : 5/12/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

AM PEAK HOUR	Leach (Pearson) Road Southbound					Eight Mile Road Westbound					Leach (Pearson) Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 07:00 to 08:00																						
Peak Hour For Entire Intersection Begins at 07:00																						
07:00	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	149	0	0	149	227	
07:15	0	0	0	0	0	0	101	0	0	101	0	0	0	0	0	0	158	0	0	158	259	
07:30	0	0	0	0	0	0	121	1	0	122	0	0	0	0	0	0	134	0	0	134	256	
07:45	0	0	0	0	0	0	135	0	0	135	0	0	0	0	0	0	167	0	0	167	302	
Total Volume	5	0	5	0	0	0	435	5	0	436	0	0	0	0	0	5	608	0	0	608	1044	
% App Total	#DIV/0!	0.0%	#DIV/0!	0.0%		0.0%	99.8%	1.1%	0.0%		0.0%	0.0%	0.0%	0.0%		0.8%	100.0%	0.0%	0.0%			
PHF	.000	.000	.000	.000	.000	.000	.806	1.250	.000	.807	.000	.000	.000	.000	.000	.000	.910	.000	.000	.910	.864	

PM PEAK HOUR	Leach (Pearson) Road Southbound					Eight Mile Road Westbound					Leach (Pearson) Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	1	134	0	0	135	274	
17:00	0	0	0	0	0	0	137	0	0	137	0	0	0	0	0	0	90	0	0	90	227	
17:15	0	0	0	0	0	0	154	0	0	154	1	0	0	0	1	0	107	0	0	107	262	
17:30	0	0	0	0	0	0	142	0	0	142	0	0	0	0	0	0	125	0	0	125	267	
Total Volume	5	0	5	0	0	0	572	5	0	572	0	0	0	0	1	5	456	0	0	457	1030	
% App Total	#DIV/0!	0.0%	#DIV/0!	0.0%		0.0%	100.0%	0.9%	0.0%		0.0%	0.0%	0.0%	0.0%		1.1%	99.8%	0.0%	0.0%			
PHF	.000	.000	.000	.000	.000	.000	.929	.000	.000	.929	.000	.000	.000	.000	.250	1.250	.851	.000	.000	.846	.940	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-031 Micke Grove Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	Micke Grove Road Southbound					Eight Mile Road Westbound					Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	2	0	2	0	4	0	88	6	0	94	0	0	0	0	0	5	116	0	0	121	219	0
07:15	2	0	1	0	3	0	88	2	0	90	0	0	0	0	0	4	139	0	0	143	236	0
07:30	3	0	2	0	5	0	113	2	0	115	0	0	0	0	0	3	136	0	0	139	259	0
07:45	4	0	3	0	7	0	124	8	0	132	0	0	0	0	0	4	120	0	0	124	263	0
Total	11	0	8	0	19	0	413	18	0	431	0	0	0	0	0	16	511	0	0	527	977	0
08:00	2	0	4	0	6	0	115	1	0	116	0	0	0	0	0	3	129	0	0	132	254	0
08:15	2	0	0	0	2	0	87	1	0	88	0	0	0	0	0	3	103	0	0	106	196	0
08:30	3	0	2	0	5	0	87	1	0	88	0	0	0	0	0	3	114	0	0	117	210	0
08:45	4	0	2	0	6	0	80	2	0	82	0	0	0	0	0	7	90	0	0	97	185	0
Total	11	0	8	0	19	0	369	5	0	374	0	0	0	0	0	16	436	0	0	452	845	0
16:00	3	0	6	0	9	0	135	6	0	141	0	0	0	0	0	5	116	0	0	121	271	0
16:15	5	0	3	0	8	0	136	5	0	141	0	0	0	0	0	3	145	0	0	148	297	0
16:30	8	0	8	0	16	0	155	4	0	159	0	0	0	0	0	2	119	0	0	121	296	0
16:45	4	0	5	0	9	0	134	6	0	140	0	0	0	0	0	5	121	0	0	126	275	0
Total	20	0	22	0	42	0	560	21	0	581	0	0	0	0	0	15	501	0	0	516	1139	0
17:00	13	0	5	0	18	0	137	4	0	141	0	0	0	0	0	5	112	0	0	117	276	0
17:15	8	0	6	0	14	0	141	3	0	144	0	0	0	0	0	1	123	0	0	124	282	0
17:30	5	0	3	0	8	0	113	3	0	116	0	0	0	0	0	1	119	0	0	120	244	0
17:45	5	0	3	0	8	0	101	1	0	102	0	0	0	0	0	2	117	0	0	119	229	0
Total	31	0	17	0	48	0	492	11	0	503	0	0	0	0	0	9	471	0	0	480	1031	0
Grand Total	73	0	55	0	128	0	1834	55	0	1889	0	0	0	0	0	56	1919	0	0	1975	3992	0
Apprch %	57.0%	0.0%	43.0%	0.0%		0.0%	97.1%	2.9%	0.0%		0.0%	0.0%	0.0%	0.0%		2.8%	97.2%	0.0%	0.0%			
Total %	1.8%	0.0%	1.4%	0.0%	3.2%	0.0%	45.9%	1.4%	0.0%	47.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	48.1%	0.0%	0.0%	49.5%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-031 Micke Grove Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Micke Grove Road Southbound					Eight Mile Road Westbound					Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	2	0	1	0	3	0	88	2	0	90	0	0	0	0	0	4	139	0	0	143	236
07:30	3	0	2	0	5	0	113	2	0	115	0	0	0	0	0	3	136	0	0	139	259
07:45	4	0	3	0	7	0	124	8	0	132	0	0	0	0	0	4	120	0	0	124	263
08:00	2	0	4	0	6	0	115	1	0	116	0	0	0	0	0	3	129	0	0	132	254
Total Volume	11	0	10	0	21	0	440	13	0	453	0	0	0	0	0	14	524	0	0	538	1012
% App Total	52.4%	0.0%	47.6%	0.0%		0.0%	97.1%	2.9%	0.0%		0.0%	0.0%	0.0%	0.0%		2.6%	97.4%	0.0%	0.0%		
PHF	.688	.000	.625	.000	.750	.000	.887	.406	.000	.858	.000	.000	.000	.000	.000	.875	.942	.000	.000	.941	.962

PM PEAK HOUR	Micke Grove Road Southbound					Eight Mile Road Westbound					Northbound					Eight Mile Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	5	0	3	0	8	0	136	5	0	141	0	0	0	0	0	3	145	0	0	148	297
16:30	8	0	8	0	16	0	155	4	0	159	0	0	0	0	0	2	119	0	0	121	296
16:45	4	0	5	0	9	0	134	6	0	140	0	0	0	0	0	5	121	0	0	126	275
17:00	13	0	5	0	18	0	137	4	0	141	0	0	0	0	0	5	112	0	0	117	276
Total Volume	30	0	21	0	51	0	562	19	0	581	0	0	0	0	0	15	497	0	0	512	1144
% App Total	58.8%	0.0%	41.2%	0.0%		0.0%	96.7%	3.3%	0.0%		0.0%	0.0%	0.0%	0.0%		2.9%	97.1%	0.0%	0.0%		
PHF	.577	.000	.656	.000	.708	.000	.906	.792	.000	.914	.000	.000	.000	.000	.000	.750	.857	.000	.000	.865	.963

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-034 99 SB Frontage Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	99 SB Frontage Road Southbound					Eight Mile Road Westbound					99 SB Frontage Road Northbound					Eight Mile Road Eastbound					Total	Uturn Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	6	2	0	8	28	55	2	0	85	33	5	15	0	53	2	59	52	0	113	259	0
07:15	1	9	1	0	11	32	61	2	0	95	33	3	32	0	68	2	68	68	0	138	312	0
07:30	3	2	3	0	8	42	79	2	0	123	32	6	33	0	71	0	74	60	0	134	336	0
07:45	5	11	2	0	18	27	83	4	0	114	43	5	50	0	98	2	90	49	0	141	371	0
Total	9	28	8	0	45	129	278	10	0	417	141	19	130	0	290	6	291	229	0	526	1278	0
08:00	2	1	1	0	4	26	82	4	0	112	37	7	41	0	85	2	62	55	0	119	320	0
08:15	1	5	3	0	9	22	46	0	0	68	35	3	32	0	70	2	65	38	0	105	252	0
08:30	4	3	0	0	7	14	54	2	0	70	30	5	30	0	65	2	79	43	0	124	266	0
08:45	7	4	3	0	14	17	44	5	0	66	36	7	30	0	73	0	51	41	0	92	245	0
Total	14	13	7	0	34	79	226	11	0	316	138	22	133	0	293	6	257	177	0	440	1083	0
16:00	3	7	0	0	10	25	113	3	0	141	32	10	30	0	72	0	79	40	0	119	342	0
16:15	3	11	2	0	16	26	109	5	0	140	32	4	33	0	69	1	96	57	0	154	379	0
16:30	7	11	5	0	23	22	99	7	0	128	54	2	28	0	84	0	73	44	0	117	352	0
16:45	4	12	2	0	18	26	96	2	0	124	38	9	43	0	90	2	76	51	0	129	361	0
Total	17	41	9	0	67	99	417	17	0	533	156	25	134	0	315	3	324	192	0	519	1434	0
17:00	4	10	0	0	14	25	86	4	0	115	56	2	31	0	89	0	74	51	0	125	343	0
17:15	4	7	0	0	11	24	84	3	0	111	59	7	36	0	102	4	75	50	0	129	353	0
17:30	8	10	0	0	18	17	78	7	0	102	33	3	26	0	62	4	79	37	0	120	302	0
17:45	5	6	2	0	13	23	68	4	0	95	35	1	21	0	57	2	78	40	0	120	285	0
Total	21	33	2	0	56	89	316	18	0	423	183	13	114	0	310	10	306	178	0	494	1283	0
Grand Total	61	115	26	0	202	396	1237	56	0	1689	618	79	511	0	1208	25	1178	776	0	1979	5078	0
Apprch %	30.2%	56.9%	12.9%	0.0%		23.4%	73.2%	3.3%	0.0%		51.2%	6.5%	42.3%	0.0%		1.3%	59.5%	39.2%	0.0%			
Total %	1.2%	2.3%	0.5%	0.0%	4.0%	7.8%	24.4%	1.1%	0.0%	33.3%	12.2%	1.6%	10.1%	0.0%	23.8%	0.5%	23.2%	15.3%	0.0%	39.0%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-034 99 SB Frontage Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	99 SB Frontage Road Southbound					Eight Mile Road Westbound					99 SB Frontage Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 07:15 to 08:15																						
Peak Hour For Entire Intersection Begins at 07:15																						
07:15	1	9	1	0	11	32	61	2	0	95	33	3	32	0	68	2	68	68	0	138	312	
07:30	3	2	3	0	8	42	79	2	0	123	32	6	33	0	71	0	74	60	0	134	336	
07:45	5	11	2	0	18	27	83	4	0	114	43	5	50	0	98	2	90	49	0	141	371	
08:00	2	1	1	0	4	26	82	4	0	112	37	7	41	0	85	2	62	55	0	119	320	
Total Volume	11	23	7	0	41	127	305	12	0	444	145	21	156	0	322	6	294	232	0	532	1339	
% App Total	26.8%	56.1%	17.1%	0.0%		28.6%	68.7%	2.7%	0.0%		45.0%	6.5%	48.4%	0.0%		1.1%	55.3%	43.6%	0.0%			
PHF	.550	.523	.583	.000	.569	.756	.919	.750	.000	.902	.843	.750	.780	.000	.821	.750	.817	.853	.000	.943	.902	

PM PEAK HOUR	99 SB Frontage Road Southbound					Eight Mile Road Westbound					99 SB Frontage Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 16:15 to 17:15																						
Peak Hour For Entire Intersection Begins at 16:15																						
16:15	3	11	2	0	16	26	109	5	0	140	32	4	33	0	69	1	96	57	0	154	379	
16:30	7	11	5	0	23	22	99	7	0	128	54	2	28	0	84	0	73	44	0	117	352	
16:45	4	12	2	0	18	26	96	2	0	124	38	9	43	0	90	2	76	51	0	129	361	
17:00	4	10	0	0	14	25	86	4	0	115	56	2	31	0	89	0	74	51	0	125	343	
Total Volume	18	44	9	0	71	99	390	18	0	507	180	17	135	0	332	3	319	203	0	525	1435	
% App Total	25.4%	62.0%	12.7%	0.0%		19.5%	76.9%	3.6%	0.0%		54.2%	5.1%	40.7%	0.0%		0.6%	60.8%	38.7%	0.0%			
PHF	.643	.917	.450	.000	.772	.952	.894	.643	.000	.905	.804	.472	.785	.000	.922	.375	.831	.890	.000	.852	.947	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-036 99 NB Frontage Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	99 NB Frontage Road Southbound					Eight Mile Road Westbound					99 NB Frontage Road Northbound					Eight Mile Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	3	11	0	14	13	41	2	0	56	30	5	7	0	42	3	20	51	0	74	186	0
07:15	1	7	10	0	18	11	54	1	0	66	29	6	4	0	39	2	29	72	0	103	226	0
07:30	1	4	12	0	17	26	65	1	0	92	48	6	6	0	60	7	29	70	0	106	275	0
07:45	0	9	8	0	17	14	65	3	0	82	41	12	7	0	60	5	27	110	0	142	301	0
Total	2	23	41	0	66	64	225	7	0	296	148	29	24	0	201	17	105	303	0	425	988	0
08:00	2	10	21	0	33	15	50	2	0	67	40	10	8	0	58	9	21	77	0	107	265	0
08:15	2	11	16	0	29	12	37	2	0	51	17	11	6	1	35	3	28	67	0	98	213	1
08:30	7	12	5	0	24	10	40	0	0	50	20	12	5	0	37	6	27	80	0	113	224	0
08:45	2	5	6	0	13	13	46	3	0	62	18	8	5	0	31	2	24	63	0	89	195	0
Total	13	38	48	0	99	50	173	7	0	230	95	41	24	1	161	20	100	287	0	407	897	1
16:00	4	5	8	0	17	15	55	2	0	72	86	12	20	0	118	8	46	59	0	113	320	0
16:15	2	8	15	0	25	8	50	2	0	60	69	15	18	0	102	6	68	56	0	130	317	0
16:30	1	9	14	0	24	17	46	3	0	66	74	10	14	0	98	4	44	59	0	107	295	0
16:45	2	8	11	0	21	7	42	0	0	49	61	12	25	0	98	4	51	66	0	121	289	0
Total	9	30	48	0	87	47	193	7	0	247	290	49	77	0	416	22	209	240	0	471	1221	0
17:00	2	7	12	0	21	11	35	1	0	47	73	11	23	0	107	5	45	59	0	109	284	0
17:15	2	4	8	0	14	18	42	0	0	60	52	14	19	0	85	1	46	72	0	119	278	0
17:30	0	6	9	0	15	3	29	4	0	36	66	10	23	0	99	8	42	58	0	108	258	0
17:45	1	10	4	0	15	15	40	2	0	57	53	8	19	0	80	3	45	59	0	107	259	0
Total	5	27	33	0	65	47	146	7	0	200	244	43	84	0	371	17	178	248	0	443	1079	0
Grand Total	29	118	170	0	317	208	737	28	0	973	777	162	209	1	1149	76	592	1078	0	1746	4185	1
Apprch %	9.1%	37.2%	53.6%	0.0%		21.4%	75.7%	2.9%	0.0%		67.6%	14.1%	18.2%	0.1%		4.4%	33.9%	61.7%	0.0%			
Total %	0.7%	2.8%	4.1%	0.0%	7.6%	5.0%	17.6%	0.7%	0.0%	23.2%	18.6%	3.9%	5.0%	0.0%	27.5%	1.8%	14.1%	25.8%	0.0%	41.7%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-036 99 NB Frontage Road-Eight Mile Road.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	99 NB Frontage Road Southbound					Eight Mile Road Westbound					99 NB Frontage Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 07:15 to 08:15																						
Peak Hour For Entire Intersection Begins at 07:15																						
07:15	1	7	10	0	18	11	54	1	0	66	29	6	4	0	39	2	29	72	0	103	226	
07:30	1	4	12	0	17	26	65	1	0	92	48	6	6	0	60	7	29	70	0	106	275	
07:45	0	9	8	0	17	14	65	3	0	82	41	12	7	0	60	5	27	110	0	142	301	
08:00	2	10	21	0	33	15	50	2	0	67	40	10	8	0	58	9	21	77	0	107	265	
Total Volume	4	30	51	0	85	66	234	7	0	307	158	34	25	0	217	23	106	329	0	458	1067	
% App Total	4.7%	35.3%	60.0%	0.0%		21.5%	76.2%	2.3%	0.0%		72.8%	15.7%	11.5%	0.0%		5.0%	23.1%	71.8%	0.0%			
PHF	.500	.750	.607	.000	.644	.635	.900	.583	.000	.834	.823	.708	.781	.000	.904	.639	.914	.748	.000	.806	.886	

PM PEAK HOUR	99 NB Frontage Road Southbound					Eight Mile Road Westbound					99 NB Frontage Road Northbound					Eight Mile Road Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	4	5	8	0	17	15	55	2	0	72	86	12	20	0	118	8	46	59	0	113	320	
16:15	2	8	15	0	25	8	50	2	0	60	69	15	18	0	102	6	68	56	0	130	317	
16:30	1	9	14	0	24	17	46	3	0	66	74	10	14	0	98	4	44	59	0	107	295	
16:45	2	8	11	0	21	7	42	0	0	49	61	12	25	0	98	4	51	66	0	121	289	
Total Volume	9	30	48	0	87	47	193	7	0	247	290	49	77	0	416	22	209	240	0	471	1221	
% App Total	10.3%	34.5%	55.2%	0.0%		19.0%	78.1%	2.8%	0.0%		69.7%	11.8%	18.5%	0.0%		4.7%	44.4%	51.0%	0.0%			
PHF	.563	.833	.800	.000	.870	.691	.877	.583	.000	.858	.843	.817	.770	.000	.881	.688	.768	.909	.000	.906	.954	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-035 SR 99 Frontage Road-SR 99 SB Ramps.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	SR 99 Frontage Road Southbound					SR 99 SB Ramps Westbound					SR 99 Frontage Road Northbound					Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	77	14	0	0	91	2	0	35	0	37	0	18	0	0	18	0	0	0	0	0	146	0
07:15	86	19	0	0	105	4	0	54	0	58	0	18	0	0	18	0	0	0	0	0	181	0
07:30	88	18	0	0	106	4	0	53	0	57	0	16	0	0	16	0	0	0	0	0	179	0
07:45	64	20	0	0	84	2	0	69	0	71	0	25	0	0	25	0	0	0	0	0	180	0
Total	315	71	0	0	386	12	0	211	0	223	0	77	0	0	77	0	0	0	0	0	686	0
08:00	54	31	0	0	85	2	0	63	0	65	0	27	1	0	28	0	0	0	0	0	178	0
08:15	45	20	0	0	65	1	0	49	0	50	0	15	2	0	17	0	0	0	0	0	132	0
08:30	41	18	0	0	59	3	0	45	0	48	0	28	1	0	29	0	0	0	0	0	136	0
08:45	44	20	0	0	64	3	0	51	0	54	0	19	0	0	19	0	0	0	0	0	137	0
Total	184	89	0	0	273	9	0	208	0	217	0	89	4	0	93	0	0	0	0	0	583	0
16:00	38	35	0	0	73	7	0	46	0	53	0	22	3	0	25	0	0	0	0	0	151	0
16:15	57	31	0	0	88	6	0	59	0	65	0	20	0	0	20	0	0	0	0	0	173	0
16:30	47	36	0	0	83	6	0	55	0	61	0	24	1	0	25	0	0	0	0	0	169	0
16:45	60	25	0	0	85	3	0	66	0	69	0	30	3	0	33	0	0	0	0	0	187	0
Total	202	127	0	0	329	22	0	226	0	248	0	96	7	0	103	0	0	0	0	0	680	0
17:00	59	28	0	0	87	5	0	61	0	66	0	26	2	0	28	0	0	0	0	0	181	0
17:15	48	30	0	0	78	8	0	83	0	91	0	13	0	0	13	0	0	0	0	0	182	0
17:30	44	23	0	0	67	2	0	51	0	53	0	17	0	0	17	0	0	0	0	0	137	0
17:45	46	21	0	0	67	3	0	42	0	45	0	12	3	0	15	0	0	0	0	0	127	0
Total	197	102	0	0	299	18	0	237	0	255	0	68	5	0	73	0	0	0	0	0	627	0
Grand Total	898	389	0	0	1287	61	0	882	0	943	0	330	16	0	346	0	0	0	0	0	2576	0
Apprch %	69.8%	30.2%	0.0%	0.0%		6.5%	0.0%	93.5%	0.0%		0.0%	95.4%	4.6%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	34.9%	15.1%	0.0%	0.0%	50.0%	2.4%	0.0%	34.2%	0.0%	36.6%	0.0%	12.8%	0.6%	0.0%	13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-037 SR 99 Frontage Road-SR 99 NB Ramps.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

START TIME	SR 99 Frontage Road Southbound					Westbound					SR 99 Frontage Road Northbound					SR 99 NB Ramps Eastbound					Total	Uturm Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	23	47	0	70	0	0	0	0	0	20	32	0	0	52	15	0	7	0	22	144	0
07:15	0	45	46	0	91	0	0	0	0	0	31	20	0	0	51	19	0	9	0	28	170	0
07:30	0	54	42	0	96	0	0	0	0	0	25	36	0	0	61	26	0	13	0	39	196	0
07:45	0	84	54	0	138	0	0	0	0	0	31	38	0	0	69	21	0	12	0	33	240	0
Total	0	206	189	0	395	0	0	0	0	0	107	126	0	0	233	81	0	41	0	122	750	0
08:00	0	68	36	0	104	0	0	0	0	0	40	40	0	0	80	14	0	8	0	22	206	0
08:15	0	44	41	0	85	0	0	0	0	0	28	25	0	0	53	12	0	6	0	18	156	0
08:30	0	40	61	0	101	0	0	0	0	0	29	21	0	0	50	10	0	6	0	16	167	0
08:45	0	40	46	0	86	0	0	0	0	0	31	24	0	0	55	12	0	4	0	16	157	0
Total	0	192	184	0	376	0	0	0	0	0	128	110	0	0	238	48	0	24	0	72	686	0
16:00	0	44	37	0	81	0	0	0	0	0	12	56	0	0	68	52	0	10	0	62	211	0
16:15	0	40	30	0	70	0	0	0	0	0	10	48	0	0	58	56	0	11	0	67	195	0
16:30	0	41	39	0	80	0	0	0	0	0	13	42	0	0	55	54	0	9	0	63	198	0
16:45	0	45	38	0	83	0	0	0	0	0	15	49	0	0	64	60	0	12	0	72	219	0
Total	0	170	144	0	314	0	0	0	0	0	50	195	0	0	245	222	0	42	0	264	823	0
17:00	0	45	39	0	84	0	0	0	0	0	16	37	0	0	53	62	0	7	0	69	206	0
17:15	0	48	35	0	83	0	0	0	0	0	13	42	0	0	55	50	0	11	0	61	199	0
17:30	0	34	43	0	77	0	0	0	0	0	16	38	0	0	54	55	0	11	0	66	197	0
17:45	0	43	36	0	79	0	0	0	0	0	15	28	0	0	43	54	0	11	0	65	187	0
Total	0	170	153	0	323	0	0	0	0	0	60	145	0	0	205	221	0	40	0	261	789	0
Grand Total	0	738	670	0	1408	0	0	0	0	0	345	576	0	0	921	572	0	147	0	719	3048	0
Apprch %	0.0%	52.4%	47.6%	0.0%		0.0%	0.0%	0.0%	0.0%		37.5%	62.5%	0.0%	0.0%		79.6%	0.0%	20.4%	0.0%			
Total %	0.0%	24.2%	22.0%	0.0%	46.2%	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	18.9%	0.0%	0.0%	30.2%	18.8%	0.0%	4.8%	0.0%	23.6%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-037 SR 99 Frontage Road-SR 99 NB Ramps.ppd

Date : 5/6/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	SR 99 Frontage Road Southbound					Westbound					SR 99 Frontage Road Northbound					SR 99 NB Ramps Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	0	45	46	0	91	0	0	0	0	0	31	20	0	0	51	19	0	9	0	28	170
07:30	0	54	42	0	96	0	0	0	0	0	25	36	0	0	61	26	0	13	0	39	196
07:45	0	84	54	0	138	0	0	0	0	0	31	38	0	0	69	21	0	12	0	33	240
08:00	0	68	36	0	104	0	0	0	0	0	40	40	0	0	80	14	0	8	0	22	206
Total Volume	0	251	178	0	429	0	0	0	0	0	127	134	0	0	261	80	0	42	0	122	812
% App Total	0.0%	58.5%	41.5%	0.0%		0.0%	0.0%	0.0%	0.0%		48.7%	51.3%	0.0%	0.0%		65.6%	0.0%	34.4%	0.0%		
PHF	.000	.747	.824	.000	.777	.000	.000	.000	.000	.000	.794	.838	.000	.000	.816	.769	.000	.808	.000	.782	.846

PM PEAK HOUR	SR 99 Frontage Road Southbound					Westbound					SR 99 Frontage Road Northbound					SR 99 NB Ramps Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	44	37	0	81	0	0	0	0	0	12	56	0	0	68	52	0	10	0	62	211
16:15	0	40	30	0	70	0	0	0	0	0	10	48	0	0	58	56	0	11	0	67	195
16:30	0	41	39	0	80	0	0	0	0	0	13	42	0	0	55	54	0	9	0	63	198
16:45	0	45	38	0	83	0	0	0	0	0	15	49	0	0	64	60	0	12	0	72	219
Total Volume	0	170	144	0	314	0	0	0	0	0	50	195	0	0	245	222	0	42	0	264	823
% App Total	0.0%	54.1%	45.9%	0.0%		0.0%	0.0%	0.0%	0.0%		20.4%	79.6%	0.0%	0.0%		84.1%	0.0%	15.9%	0.0%		
PHF	.000	.944	.923	.000	.946	.000	.000	.000	.000	.000	.833	.871	.000	.000	.901	.925	.000	.875	.000	.917	.939

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-023 West Lane-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					Morada Lane Westbound					West Lane Northbound					Ronald E. McNair Way Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	15	69	33	1	118	19	53	25	0	97	78	63	23	5	169	9	81	65	0	155	539	6
07:15	82	120	9	0	211	27	36	28	0	91	33	56	50	3	142	14	64	57	0	135	579	3
07:30	79	139	5	0	223	64	5	50	0	119	14	123	71	5	213	2	8	6	0	16	571	5
07:45	57	159	7	0	223	82	6	48	0	136	4	105	63	4	176	3	3	1	0	7	542	4
Total	233	487	54	1	775	192	100	151	0	443	129	347	207	17	700	28	156	129	0	313	2231	18
08:00	65	155	3	0	223	79	8	39	0	126	4	105	70	11	190	0	6	2	0	8	547	11
08:15	56	167	8	0	231	100	9	40	0	149	11	87	58	8	164	2	3	5	0	10	554	8
08:30	27	120	7	0	154	58	6	30	0	94	9	112	38	5	164	0	4	8	0	12	424	5
08:45	20	120	9	0	149	61	14	28	0	103	17	83	29	5	134	5	9	21	0	35	421	5
Total	168	562	27	0	757	298	37	137	0	472	41	387	195	29	652	7	22	36	0	65	1946	29
16:00	39	97	2	0	138	78	8	63	0	149	4	136	85	2	227	2	11	7	0	20	534	2
16:15	52	91	2	0	145	77	11	36	0	124	6	165	92	1	264	5	6	6	0	17	550	1
16:30	35	120	1	0	156	84	4	37	0	125	2	133	79	0	214	8	9	6	0	23	518	0
16:45	55	128	5	1	189	91	7	42	0	140	7	143	59	2	211	8	13	7	0	28	568	3
Total	181	436	10	1	628	330	30	178	0	538	19	577	315	5	916	23	39	26	0	88	2170	6
17:00	47	119	3	0	169	76	7	31	0	114	12	142	65	5	224	1	6	12	0	19	526	5
17:15	62	128	0	0	190	68	6	36	0	110	10	165	79	4	258	3	5	3	0	11	569	4
17:30	41	134	4	0	179	82	7	39	0	128	4	146	77	4	231	5	4	11	0	20	558	4
17:45	41	131	1	1	174	84	6	39	0	129	5	149	55	7	216	3	1	9	0	13	532	8
Total	191	512	8	1	712	310	26	145	0	481	31	602	276	20	929	12	16	35	0	63	2185	21
Grand Total	773	1997	99	3	2872	1130	193	611	0	1934	220	1913	993	71	3197	70	233	226	0	529	8532	74
Apprch %	26.9%	69.5%	3.4%	0.1%		58.4%	10.0%	31.6%	0.0%		6.9%	59.8%	31.1%	2.2%		13.2%	44.0%	42.7%	0.0%			
Total %	9.1%	23.4%	1.2%	0.0%	33.7%	13.2%	2.3%	7.2%	0.0%	22.7%	2.6%	22.4%	11.6%	0.8%	37.5%	0.8%	2.7%	2.6%	0.0%	6.2%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-023 West Lane-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					Morada Lane Westbound					West Lane Northbound					Ronald E. McNair Way Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	82	120	9	0	211	27	36	28	0	91	33	56	50	3	142	14	64	57	0	135	579
07:30	79	139	5	0	223	64	5	50	0	119	14	123	71	5	213	2	8	6	0	16	571
07:45	57	159	7	0	223	82	6	48	0	136	4	105	63	4	176	3	3	1	0	7	542
08:00	65	155	3	0	223	79	8	39	0	126	4	105	70	11	190	0	6	2	0	8	547
Total Volume	283	573	24	0	880	252	55	165	0	472	55	389	254	23	721	19	81	66	0	166	2239
% App Total	32.2%	65.1%	2.7%	0.0%		53.4%	11.7%	35.0%	0.0%		7.6%	54.0%	35.2%	3.2%		11.4%	48.8%	39.8%	0.0%		
PHF	.863	.901	.667	.000	.987	.768	.382	.825	.000	.868	.417	.791	.894	.523	.846	.339	.316	.289	.000	.307	.967

PM PEAK HOUR	West Lane Southbound					Morada Lane Westbound					West Lane Northbound					Ronald E. McNair Way Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	55	128	5	1	189	91	7	42	0	140	7	143	59	2	211	8	13	7	0	28	568
17:00	47	119	3	0	169	76	7	31	0	114	12	142	65	5	224	1	6	12	0	19	526
17:15	62	128	0	0	190	68	6	36	0	110	10	165	79	4	258	3	5	3	0	11	569
17:30	41	134	4	0	179	82	7	39	0	128	4	146	77	4	231	5	4	11	0	20	558
Total Volume	205	509	12	1	727	317	27	148	0	492	33	596	280	15	924	17	28	33	0	78	2221
% App Total	28.2%	70.0%	1.7%	0.1%		64.4%	5.5%	30.1%	0.0%		3.6%	64.5%	30.3%	1.6%		21.8%	35.9%	42.3%	0.0%		
PHF	.827	.950	.600	.250	.957	.871	.964	.881	.000	.879	.688	.903	.886	.750	.895	.531	.538	.688	.000	.696	.976

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-032 Holman Road-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	Holman Road Southbound					Morada Lane Westbound					Holman Road Northbound					Morada Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	45	24	32	0	101	20	59	15	0	94	20	9	16	3	48	22	93	34	1	150	393	4
07:15	44	28	19	0	91	25	93	30	0	148	28	13	25	5	71	14	104	35	1	154	464	6
07:30	67	38	37	0	142	26	164	24	0	214	55	7	21	4	87	20	165	32	5	222	665	9
07:45	53	33	43	0	129	35	114	39	0	188	26	20	21	0	67	33	162	41	0	236	620	0
Total	209	123	131	0	463	106	430	108	0	644	129	49	83	12	273	89	524	142	7	762	2142	19
08:00	67	37	48	0	152	49	102	58	0	209	40	27	21	9	97	29	121	18	0	168	626	9
08:15	96	50	37	0	183	30	97	48	0	175	45	27	25	5	102	40	101	42	1	184	644	6
08:30	60	34	29	0	123	54	84	34	0	172	15	19	43	4	81	18	93	26	0	137	513	4
08:45	30	30	28	0	88	45	80	33	0	158	17	16	26	3	62	9	57	16	0	82	390	3
Total	253	151	142	0	546	178	363	173	0	714	117	89	115	21	342	96	372	102	1	571	2173	22
16:00	28	21	27	0	76	39	99	36	1	175	41	21	34	1	97	23	95	31	1	150	498	3
16:15	35	23	20	0	78	46	121	38	0	205	20	33	42	4	99	26	95	39	1	161	543	5
16:30	39	24	16	0	79	45	111	45	0	201	29	24	40	1	94	13	91	20	0	124	498	1
16:45	30	31	14	0	75	47	114	56	0	217	28	35	39	6	108	18	89	38	0	145	545	6
Total	132	99	77	0	308	177	445	175	1	798	118	113	155	12	398	80	370	128	2	580	2084	15
17:00	16	17	26	0	59	45	122	42	1	210	33	26	41	4	104	39	93	23	2	157	530	7
17:15	29	28	18	0	75	40	121	52	1	214	29	42	38	5	114	29	83	32	4	148	551	10
17:30	19	27	25	0	71	44	120	35	0	199	40	38	39	2	119	25	76	29	1	131	520	3
17:45	17	27	20	0	64	42	107	35	1	185	29	36	39	3	107	28	54	20	3	105	461	7
Total	81	99	89	0	269	171	470	164	3	808	131	142	157	14	444	121	306	104	10	541	2062	27
Grand Total	675	472	439	0	1586	632	1708	620	4	2964	495	393	510	59	1457	386	1572	476	20	2454	8461	83
Apprch %	42.6%	29.8%	27.7%	0.0%	18.7%	21.3%	57.6%	20.9%	0.1%	35.0%	34.0%	27.0%	35.0%	4.0%	17.2%	15.7%	64.1%	19.4%	0.8%	29.0%	100.0%	
Total %	8.0%	5.6%	5.2%	0.0%	18.7%	7.5%	20.2%	7.3%	0.0%	35.0%	5.9%	4.6%	6.0%	0.7%	17.2%	4.6%	18.6%	5.6%	0.2%	29.0%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-032 Holman Road-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Holman Road Southbound					Morada Lane Westbound					Holman Road Northbound					Morada Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	67	38	37	0	142	26	164	24	0	214	55	7	21	4	87	20	165	32	5	222	665
07:45	53	33	43	0	129	35	114	39	0	188	26	20	21	0	67	33	162	41	0	236	620
08:00	67	37	48	0	152	49	102	58	0	209	40	27	21	9	97	29	121	18	0	168	626
08:15	96	50	37	0	183	30	97	48	0	175	45	27	25	5	102	40	101	42	1	184	644
Total Volume	283	158	165	0	606	140	477	169	0	786	166	81	88	18	353	122	549	133	6	810	2555
% App Total	46.7%	26.1%	27.2%	0.0%		17.8%	60.7%	21.5%	0.0%		47.0%	22.9%	24.9%	5.1%		15.1%	67.8%	16.4%	0.7%		
PHF	.737	.790	.859	.000	.828	.714	.727	.728	.000	.918	.755	.750	.880	.500	.865	.763	.832	.792	.300	.858	.961

PM PEAK HOUR	Holman Road Southbound					Morada Lane Westbound					Holman Road Northbound					Morada Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	30	31	14	0	75	47	114	56	0	217	28	35	39	6	108	18	89	38	0	145	545
17:00	16	17	26	0	59	45	122	42	1	210	33	26	41	4	104	39	93	23	2	157	530
17:15	29	28	18	0	75	40	121	52	1	214	29	42	38	5	114	29	83	32	4	148	551
17:30	19	27	25	0	71	44	120	35	0	199	40	38	39	2	119	25	76	29	1	131	520
Total Volume	94	103	83	0	280	176	477	185	2	840	130	141	157	17	445	111	341	122	7	581	2146
% App Total	33.6%	36.8%	29.6%	0.0%		21.0%	56.8%	22.0%	0.2%		29.2%	31.7%	35.3%	3.8%		19.1%	58.7%	21.0%	1.2%		
PHF	.783	.831	.798	.000	.933	.936	.977	.826	.500	.968	.813	.839	.957	.708	.935	.712	.917	.803	.438	.925	.974

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-038 99 SB Frontage Road (Morada)-SR 99 SB Rai

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	99 SB Frontage Road (Morada) Southbound					SR 99 SB Ramps Westbound					99 SB Frontage Road (Morada) Northbound					Eastbound					Total	Uturn Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	5	12	0	0	17	28	0	3	0	31	0	9	125	0	134	0	0	0	0	0	182	0
07:15	1	5	0	0	6	60	0	3	0	63	0	15	161	0	176	0	0	0	0	0	245	0
07:30	7	11	0	0	18	81	0	5	0	86	0	5	201	0	206	0	0	0	0	0	310	0
07:45	13	14	0	0	27	45	0	5	0	50	0	20	168	0	188	0	0	0	0	0	265	0
Total	26	42	0	0	68	214	0	16	0	230	0	49	655	0	704	0	0	0	0	0	1002	0
08:00	5	12	0	0	17	49	0	3	0	52	0	12	127	0	139	0	0	0	0	0	208	0
08:15	5	18	0	0	23	30	0	4	0	34	0	9	115	0	124	0	0	0	0	0	181	0
08:30	4	13	0	0	17	25	0	2	0	27	0	21	96	0	117	0	0	0	0	0	161	0
08:45	4	11	0	0	15	26	0	3	0	29	0	7	86	0	93	0	0	0	0	0	137	0
Total	18	54	0	0	72	130	0	12	0	142	0	49	424	0	473	0	0	0	0	0	687	0
16:00	5	18	0	0	23	64	0	5	0	69	0	22	71	0	93	0	0	0	0	0	185	0
16:15	1	15	0	0	16	55	0	7	0	62	0	18	56	0	74	0	0	0	0	0	152	0
16:30	6	26	0	0	32	80	0	3	0	83	0	17	66	0	83	0	0	0	0	0	198	0
16:45	7	22	0	0	29	81	0	6	0	87	0	12	59	0	71	0	0	0	0	0	187	0
Total	19	81	0	0	100	280	0	21	0	301	0	69	252	0	321	0	0	0	0	0	722	0
17:00	2	12	0	0	14	70	0	2	0	72	0	20	59	0	79	0	0	0	0	0	165	0
17:15	10	24	0	0	34	79	0	2	0	81	0	12	58	0	70	0	0	0	0	0	185	0
17:30	6	23	0	0	29	60	0	3	0	63	0	11	58	0	69	0	0	0	0	0	161	0
17:45	9	15	0	0	24	76	0	3	0	79	0	19	41	0	60	0	0	0	0	0	163	0
Total	27	74	0	0	101	285	0	10	0	295	0	62	216	0	278	0	0	0	0	0	674	0
Grand Total	90	251	0	0	341	909	0	59	0	968	0	229	1547	0	1776	0	0	0	0	0	3085	0
Apprch %	26.4%	73.6%	0.0%	0.0%		93.9%	0.0%	6.1%	0.0%		0.0%	12.9%	87.1%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	2.9%	8.1%	0.0%	0.0%	11.1%	29.5%	0.0%	1.9%	0.0%	31.4%	0.0%	7.4%	50.1%	0.0%	57.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-040 99 NB Frontage Road (Morada)-SR 99 NB Ra

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	99 NB Frontage Road (Morada) Southbound					Westbound					99 NB Frontage Road (Morada) Northbound					SR 99 NB Ramps Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	0	46	2	0	48	0	0	0	0	0	63	18	0	0	81	8	0	34	0	42	171	0
07:15	0	63	0	0	63	0	0	0	0	0	50	36	0	0	86	9	0	50	0	59	208	0
07:30	0	94	1	0	95	0	0	0	0	0	70	72	0	0	142	10	0	53	0	63	300	0
07:45	0	110	0	0	110	0	0	0	0	0	74	78	0	0	152	21	0	61	0	82	344	0
Total	0	313	3	0	316	0	0	0	0	0	257	204	0	0	461	48	0	198	0	246	1023	0
08:00	0	128	1	0	129	0	0	0	0	0	41	79	0	0	120	21	0	52	0	73	322	0
08:15	0	79	0	0	79	0	0	0	0	0	36	107	0	0	143	19	0	37	0	56	278	0
08:30	0	109	1	0	110	0	0	0	0	0	41	112	0	0	153	18	0	28	0	46	309	0
08:45	0	129	0	0	129	0	0	0	0	0	33	66	0	0	99	13	0	34	0	47	275	0
Total	0	445	2	0	447	0	0	0	0	0	151	364	0	0	515	71	0	151	0	222	1184	0
16:00	0	44	1	0	45	0	0	0	0	0	36	39	0	0	75	16	0	89	0	105	225	0
16:15	0	43	2	0	45	0	0	0	0	0	49	53	0	0	102	11	0	131	0	142	289	0
16:30	0	41	0	0	41	0	0	0	0	0	47	48	0	0	95	26	0	104	0	130	266	0
16:45	0	58	1	0	59	0	0	0	0	0	40	48	0	1	89	32	0	110	0	142	290	1
Total	0	186	4	0	190	0	0	0	0	0	172	188	0	1	361	85	0	434	0	519	1070	1
17:00	0	53	1	0	54	0	0	0	0	0	36	42	0	0	78	26	0	119	0	145	277	0
17:15	0	52	2	0	54	0	0	0	0	0	41	53	0	0	94	21	0	132	0	153	301	0
17:30	0	62	7	0	69	0	0	0	0	0	41	43	0	0	84	21	0	95	0	116	269	0
17:45	0	44	0	0	44	0	0	0	0	0	45	33	0	0	78	20	0	115	0	135	257	0
Total	0	211	10	0	221	0	0	0	0	0	163	171	0	0	334	88	0	461	0	549	1104	0
Grand Total	0	1155	19	0	1174	0	0	0	0	0	743	927	0	1	1671	292	0	1244	0	1536	4381	1
Apprch %	0.0%	98.4%	1.6%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	44.5%	55.5%	0.0%	0.1%		19.0%	0.0%	81.0%	0.0%			
Total %	0.0%	26.4%	0.4%	0.0%	26.8%	0.0%	0.0%	0.0%	0.0%	0.0%	17.0%	21.2%	0.0%	0.0%	38.1%	6.7%	0.0%	28.4%	0.0%	35.1%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-040 99 NB Frontage Road (Morada)-SR 99 NB Ra

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	99 NB Frontage Road (Morada) Southbound					Westbound					99 NB Frontage Road (Morada) Northbound					SR 99 NB Ramps Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	110	0	0	110	0	0	0	0	0	74	78	0	0	152	21	0	61	0	82	344
08:00	0	128	1	0	129	0	0	0	0	0	41	79	0	0	120	21	0	52	0	73	322
08:15	0	79	0	0	79	0	0	0	0	0	36	107	0	0	143	19	0	37	0	56	278
08:30	0	109	1	0	110	0	0	0	0	0	41	112	0	0	153	18	0	28	0	46	309
Total Volume	0	426	2	0	428	0	0	0	0	0	192	376	0	0	568	79	0	178	0	257	1253
% App Total	0.0%	99.5%	0.5%	0.0%		0.0%	0.0%	0.0%	0.0%		33.8%	66.2%	0.0%	0.0%		30.7%	0.0%	69.3%	0.0%		
PHF	.000	.832	.500	.000	.829	.000	.000	.000	.000	.000	.649	.839	.000	.000	.928	.940	.000	.730	.000	.784	.911

PM PEAK HOUR	99 NB Frontage Road (Morada) Southbound					Westbound					99 NB Frontage Road (Morada) Northbound					SR 99 NB Ramps Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	58	1	0	59	0	0	0	0	0	40	48	0	1	89	32	0	110	0	142	290
17:00	0	53	1	0	54	0	0	0	0	0	36	42	0	0	78	26	0	119	0	145	277
17:15	0	52	2	0	54	0	0	0	0	0	41	53	0	0	94	21	0	132	0	153	301
17:30	0	62	7	0	69	0	0	0	0	0	41	43	0	0	84	21	0	95	0	116	269
Total Volume	0	225	11	0	236	0	0	0	0	0	158	186	0	1	345	100	0	456	0	556	1137
% App Total	0.0%	95.3%	4.7%	0.0%		0.0%	0.0%	0.0%	0.0%		45.8%	53.9%	0.0%	0.3%		18.0%	0.0%	82.0%	0.0%		
PHF	.000	.907	.393	.000	.855	.000	.000	.000	.000	.000	.963	.877	.000	.250	.918	.781	.000	.864	.000	.908	.944

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-039 99 SB Frontage Road-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	99 SB Frontage Road Southbound					Morada Lane Westbound					99 SB Frontage Road Northbound					Morada Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	9	4	29	0	42	3	60	24	0	87	4	6	8	0	18	107	63	2	0	172	319	0
07:15	7	7	49	0	63	1	85	57	0	143	2	6	16	0	24	113	63	5	0	181	411	0
07:30	4	3	84	0	91	5	100	69	0	174	2	3	13	0	18	132	122	3	0	257	540	0
07:45	11	1	48	0	60	5	126	59	0	190	2	6	24	0	32	119	134	3	0	256	538	0
Total	31	15	210	0	256	14	371	209	0	594	10	21	61	0	92	471	382	13	0	866	1808	0
08:00	10	4	46	0	60	8	141	52	0	201	1	3	12	0	16	86	111	5	0	202	479	0
08:15	11	4	32	0	47	4	118	36	0	158	1	2	14	0	17	88	140	0	0	228	450	0
08:30	7	4	29	0	40	11	131	45	0	187	3	5	17	0	25	67	121	4	0	192	444	0
08:45	10	2	24	0	36	6	147	31	0	184	1	1	6	0	8	58	91	3	0	152	380	0
Total	38	14	131	0	183	29	537	164	0	730	6	11	49	0	66	299	463	12	0	774	1753	0
16:00	11	3	60	0	74	0	128	23	0	151	1	5	6	0	12	63	71	1	0	135	372	0
16:15	15	3	53	0	71	1	142	15	0	158	3	5	10	0	18	56	111	4	0	171	418	0
16:30	17	8	80	0	105	0	133	20	0	153	5	4	9	0	18	58	92	5	0	155	431	0
16:45	26	7	75	0	108	2	144	25	0	171	6	3	9	0	18	44	91	7	0	142	439	0
Total	69	21	268	0	358	3	547	83	0	633	15	17	34	0	66	221	365	17	0	603	1660	0
17:00	8	8	60	0	76	6	153	22	0	181	0	4	9	0	13	51	86	5	0	142	412	0
17:15	23	6	81	0	110	7	161	23	0	191	3	3	14	0	20	44	90	4	0	138	459	0
17:30	12	19	51	0	82	4	138	18	0	160	3	7	8	0	18	45	82	8	0	135	395	0
17:45	21	5	65	0	91	9	134	25	0	168	4	1	7	0	12	33	79	3	0	115	386	0
Total	64	38	257	0	359	26	586	88	0	700	10	15	38	0	63	173	337	20	0	530	1652	0
Grand Total	202	88	866	0	1156	72	2041	544	0	2657	41	64	182	0	287	1164	1547	62	0	2773	6873	0
Apprch %	17.5%	7.6%	74.9%	0.0%		2.7%	76.8%	20.5%	0.0%		14.3%	22.3%	63.4%	0.0%		42.0%	55.8%	2.2%	0.0%			
Total %	2.9%	1.3%	12.6%	0.0%	16.8%	1.0%	29.7%	7.9%	0.0%	38.7%	0.6%	0.9%	2.6%	0.0%	4.2%	16.9%	22.5%	0.9%	0.0%	40.3%	100.0%	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-039 99 SB Frontage Road-Morada Lane.ppd

Date : 5/7/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

AM PEAK HOUR	99 SB Frontage Road Southbound					Morada Lane Westbound					99 SB Frontage Road Northbound					Morada Lane Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
07:30	4	3	84	0	91	5	100	69	0	174	2	3	13	0	18	132	122	3	0	257	540	
07:45	11	1	48	0	60	5	126	59	0	190	2	6	24	0	32	119	134	3	0	256	538	
08:00	10	4	46	0	60	8	141	52	0	201	1	3	12	0	16	86	111	5	0	202	479	
08:15	11	4	32	0	47	4	118	36	0	158	1	2	14	0	17	88	140	0	0	228	450	
Total Volume	36	12	210	0	258	22	485	216	0	723	6	14	63	0	83	425	507	11	0	943	2007	
% App Total	14.0%	4.7%	81.4%	0.0%		3.0%	67.1%	29.9%	0.0%		7.2%	16.9%	75.9%	0.0%		45.1%	53.8%	1.2%	0.0%			
PHF	.818	.750	.625	.000	.709	.688	.860	.783	.000	.899	.750	.583	.656	.000	.648	.805	.905	.550	.000	.917	.929	

PM PEAK HOUR	99 SB Frontage Road Southbound					Morada Lane Westbound					99 SB Frontage Road Northbound					Morada Lane Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS		APP.TOTAL
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	17	8	80	0	105	0	133	20	0	153	5	4	9	0	18	58	92	5	0	155	431	
16:45	26	7	75	0	108	2	144	25	0	171	6	3	9	0	18	44	91	7	0	142	439	
17:00	8	8	60	0	76	6	153	22	0	181	0	4	9	0	13	51	86	5	0	142	412	
17:15	23	6	81	0	110	7	161	23	0	191	3	3	14	0	20	44	90	4	0	138	459	
Total Volume	74	29	296	0	399	15	591	90	0	696	14	14	41	0	69	197	359	21	0	577	1741	
% App Total	18.5%	7.3%	74.2%	0.0%		2.2%	84.9%	12.9%	0.0%		20.3%	20.3%	59.4%	0.0%		34.1%	62.2%	3.6%	0.0%			
PHF	.712	.906	.914	.000	.907	.536	.918	.900	.000	.911	.583	.875	.732	.000	.863	.849	.976	.750	.000	.931	.948	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-041 99 NB Frontage Road-Morada Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	99 NB Frontage Road Southbound					Morada Lane Westbound					99 NB Frontage Road Northbound					Morada Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	2	5	71	0	78	5	16	5	0	26	5	14	2	0	21	66	7	9	0	82	207	0
07:15	6	4	104	0	114	2	35	7	0	44	6	11	2	0	19	65	10	7	1	83	260	1
07:30	7	11	126	0	144	2	39	14	0	55	14	15	5	0	34	111	17	5	0	133	366	0
07:45	15	21	132	0	168	8	42	9	0	59	8	23	9	0	40	120	28	3	0	151	418	0
Total	30	41	433	0	504	17	132	35	0	184	33	63	18	0	114	362	62	24	1	449	1251	1
08:00	19	20	146	0	185	14	50	6	0	70	6	21	14	0	41	93	48	10	0	151	447	0
08:15	2	4	105	0	111	9	49	14	0	72	7	15	9	0	31	118	26	11	0	155	369	0
08:30	10	3	133	0	146	6	55	6	0	67	11	14	7	0	32	126	21	7	0	154	399	0
08:45	5	16	140	0	161	4	31	9	0	44	2	10	4	0	16	80	17	13	0	110	331	0
Total	36	43	524	0	603	33	185	35	0	253	26	60	34	0	120	417	112	41	0	570	1546	0
16:00	8	8	121	0	137	1	23	4	0	28	12	10	7	0	29	59	18	10	0	87	281	0
16:15	11	10	147	1	169	3	13	6	0	22	7	13	6	0	26	86	40	15	0	141	358	1
16:30	10	9	124	0	143	3	26	4	0	33	2	18	6	0	26	69	32	16	1	118	320	1
16:45	21	12	139	0	172	1	22	8	0	31	10	11	7	0	28	68	38	19	0	125	356	0
Total	50	39	531	1	621	8	84	22	0	114	31	52	26	0	109	282	128	60	1	471	1315	2
17:00	13	12	139	0	164	2	27	5	0	34	8	6	5	0	19	69	24	13	0	106	323	0
17:15	24	15	149	0	188	2	29	9	0	40	9	11	8	0	28	72	37	15	0	124	380	0
17:30	16	12	134	0	162	4	26	5	0	35	10	14	8	0	32	69	22	15	0	106	335	0
17:45	17	7	133	0	157	2	15	6	0	23	10	9	8	0	27	59	25	20	0	104	311	0
Total	70	46	555	0	671	10	97	25	0	132	37	40	29	0	106	269	108	63	0	440	1349	0
Grand Total	186	169	2043	1	2399	68	498	117	0	683	127	215	107	0	449	1330	410	188	2	1930	5461	3
Apprch %	7.8%	7.0%	85.2%	0.0%		10.0%	72.9%	17.1%	0.0%		28.3%	47.9%	23.8%	0.0%		68.9%	21.2%	9.7%	0.1%			
Total %	3.4%	3.1%	37.4%	0.0%	43.9%	1.2%	9.1%	2.1%	0.0%	12.5%	2.3%	3.9%	2.0%	0.0%	8.2%	24.4%	7.5%	3.4%	0.0%	35.3%	100.0%	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-041 99 NB Frontage Road-Morada Lane.ppd

Date : 5/7/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

AM PEAK HOUR	99 NB Frontage Road Southbound					Morada Lane Westbound					99 NB Frontage Road Northbound					Morada Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	15	21	132	0	168	8	42	9	0	59	8	23	9	0	40	120	28	3	0	151	418
08:00	19	20	146	0	185	14	50	6	0	70	6	21	14	0	41	93	48	10	0	151	447
08:15	2	4	105	0	111	9	49	14	0	72	7	15	9	0	31	118	26	11	0	155	369
08:30	10	3	133	0	146	6	55	6	0	67	11	14	7	0	32	126	21	7	0	154	399
Total Volume	46	48	516	0	610	37	196	35	0	268	32	73	39	0	144	457	123	31	0	611	1633
% App Total	7.5%	7.9%	84.6%	0.0%		13.8%	73.1%	13.1%	0.0%		22.2%	50.7%	27.1%	0.0%		74.8%	20.1%	5.1%	0.0%		
PHF	.605	.571	.884	.000	.824	.661	.891	.625	.000	.931	.727	.793	.696	.000	.878	.907	.641	.705	.000	.985	.913

PM PEAK HOUR	99 NB Frontage Road Southbound					Morada Lane Westbound					99 NB Frontage Road Northbound					Morada Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	21	12	139	0	172	1	22	8	0	31	10	11	7	0	28	68	38	19	0	125	356
17:00	13	12	139	0	164	2	27	5	0	34	8	6	5	0	19	69	24	13	0	106	323
17:15	24	15	149	0	188	2	29	9	0	40	9	11	8	0	28	72	37	15	0	124	380
17:30	16	12	134	0	162	4	26	5	0	35	10	14	8	0	32	69	22	15	0	106	335
Total Volume	74	51	561	0	686	9	104	27	0	140	37	42	28	0	107	278	121	62	0	461	1394
% App Total	10.8%	7.4%	81.8%	0.0%		6.4%	74.3%	19.3%	0.0%		34.6%	39.3%	26.2%	0.0%		60.3%	26.2%	13.4%	0.0%		
PHF	.771	.850	.941	.000	.912	.563	.897	.750	.000	.875	.925	.750	.875	.000	.836	.965	.796	.816	.000	.922	.917

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-024 West Lane-West Lane Frontage Road.ppd

Date : 5/7/2015

City of Stockton
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					West Lane Frontage Road Westbound					West Lane Northbound					West Lane Frontage Road Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	4	138	10	8	160	30	2	2	0	34	13	123	8	0	144	25	1	17	0	43	381	8
07:15	1	171	10	9	191	35	3	2	0	40	10	100	6	2	118	26	2	22	0	50	399	11
07:30	0	185	11	6	202	49	3	1	0	53	14	150	13	3	180	36	5	30	0	71	506	9
07:45	2	229	14	8	253	45	4	2	0	51	18	137	7	0	162	27	7	34	0	68	534	8
Total	7	723	45	31	806	159	12	7	0	178	55	510	34	5	604	114	15	103	0	232	1820	36
08:00	6	202	15	10	233	38	6	0	0	44	39	160	21	0	220	25	3	20	0	48	545	10
08:15	3	222	29	12	266	43	5	1	0	49	33	122	10	2	167	29	0	29	0	58	540	14
08:30	2	174	12	5	193	42	0	3	0	45	26	108	14	3	151	32	1	35	0	68	457	8
08:45	5	185	10	4	204	38	1	0	0	39	15	110	18	1	144	24	1	16	0	41	428	5
Total	16	783	66	31	896	161	12	4	0	177	113	500	63	6	682	110	5	100	0	215	1970	37
16:00	1	158	11	6	176	30	2	1	0	33	45	217	31	0	293	23	5	30	0	58	560	6
16:15	3	167	9	3	182	29	5	2	0	36	41	220	34	0	295	23	3	26	0	52	565	3
16:30	2	170	14	4	190	34	2	0	0	36	46	192	30	4	272	31	3	17	0	51	549	8
16:45	2	188	18	4	212	40	2	1	0	43	39	179	23	4	245	21	5	23	0	49	549	8
Total	8	683	52	17	760	133	11	4	0	148	171	808	118	8	1105	98	16	96	0	210	2223	25
17:00	3	166	11	6	186	35	5	4	0	44	47	216	39	5	307	25	4	26	0	55	592	11
17:15	5	188	10	3	206	34	4	2	0	40	41	246	33	1	321	18	2	26	0	46	613	4
17:30	5	172	16	8	201	36	3	1	0	40	49	211	39	2	301	25	2	25	0	52	594	10
17:45	4	166	28	5	203	35	5	2	0	42	44	179	35	2	260	16	2	27	0	45	550	7
Total	17	692	65	22	796	140	17	9	0	166	181	852	146	10	1189	84	10	104	0	198	2349	32
Grand Total	48	2881	228	101	3258	593	52	24	0	669	520	2670	361	29	3580	406	46	403	0	855	8362	130
Apprch %	1.5%	88.4%	7.0%	3.1%		88.6%	7.8%	3.6%	0.0%		14.5%	74.6%	10.1%	0.8%		47.5%	5.4%	47.1%	0.0%			
Total %	0.6%	34.5%	2.7%	1.2%	39.0%	7.1%	0.6%	0.3%	0.0%	8.0%	6.2%	31.9%	4.3%	0.3%	42.8%	4.9%	0.6%	4.8%	0.0%	10.2%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-024 West Lane-West Lane Frontage Road.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					West Lane Frontage Road Westbound					West Lane Northbound					West Lane Frontage Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	0	185	11	6	202	49	3	1	0	53	14	150	13	3	180	36	5	30	0	71	506
07:45	2	229	14	8	253	45	4	2	0	51	18	137	7	0	162	27	7	34	0	68	534
08:00	6	202	15	10	233	38	6	0	0	44	39	160	21	0	220	25	3	20	0	48	545
08:15	3	222	29	12	266	43	5	1	0	49	33	122	10	2	167	29	0	29	0	58	540
Total Volume	11	838	69	36	954	175	18	4	0	197	104	569	51	5	729	117	15	113	0	245	2125
% App Total	1.2%	87.8%	7.2%	3.8%		88.8%	9.1%	2.0%	0.0%		14.3%	78.1%	7.0%	0.7%		47.8%	6.1%	46.1%	0.0%		
PHF	.458	.915	.595	.750	.897	.893	.750	.500	.000	.929	.667	.889	.607	.417	.828	.813	.536	.831	.000	.863	.975

PM PEAK HOUR	West Lane Southbound					West Lane Frontage Road Westbound					West Lane Northbound					West Lane Frontage Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	3	166	11	6	186	35	5	4	0	44	47	216	39	5	307	25	4	26	0	55	592
17:15	5	188	10	3	206	34	4	2	0	40	41	246	33	1	321	18	2	26	0	46	613
17:30	5	172	16	8	201	36	3	1	0	40	49	211	39	2	301	25	2	25	0	52	594
17:45	4	166	28	5	203	35	5	2	0	42	44	179	35	2	260	16	2	27	0	45	550
Total Volume	17	692	65	22	796	140	17	9	0	166	181	852	146	10	1189	84	10	104	0	198	2349
% App Total	2.1%	86.9%	8.2%	2.8%		84.3%	10.2%	5.4%	0.0%		15.2%	71.7%	12.3%	0.8%		42.4%	5.1%	52.5%	0.0%		
PHF	.850	.920	.580	.688	.966	.972	.850	.563	.000	.943	.923	.866	.936	.500	.926	.840	.625	.963	.000	.900	.958

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-025 West Lane-Knickerbocker Drive.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					Knickerbocker Drive Westbound					West Lane Northbound					Knickerbocker Drive Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	17	140	12	4	173	17	8	14	0	39	1	90	4	0	95	21	8	4	0	33	340	4
07:15	21	196	13	13	243	15	6	4	0	25	3	123	8	0	134	9	4	9	0	22	424	13
07:30	9	226	15	10	260	33	13	2	0	48	2	176	11	0	189	17	5	10	0	32	529	10
07:45	22	251	16	26	315	41	24	8	0	73	3	149	19	0	171	19	12	7	0	38	597	26
Total	69	813	56	53	991	106	51	28	0	185	9	538	42	0	589	66	29	30	0	125	1890	53
08:00	21	198	11	21	251	48	31	12	0	91	5	185	25	0	215	20	22	10	0	52	609	21
08:15	25	252	8	3	288	57	23	15	0	95	8	128	11	1	148	21	16	5	0	42	573	4
08:30	27	213	21	4	265	22	7	13	0	42	5	124	6	2	137	19	13	7	0	39	483	6
08:45	14	209	10	6	239	23	14	15	0	52	4	127	13	1	145	12	9	3	0	24	460	7
Total	87	872	50	34	1043	150	75	55	0	280	22	564	55	4	645	72	60	25	0	157	2125	38
16:00	26	180	9	5	220	31	25	19	0	75	14	243	17	2	276	26	25	7	0	58	629	7
16:15	14	176	23	4	217	26	21	23	0	70	13	275	17	7	312	26	26	12	0	64	663	11
16:30	24	190	13	2	229	41	19	27	0	87	6	233	21	2	262	33	26	6	0	65	643	4
16:45	24	204	14	8	250	31	18	20	0	69	16	230	22	4	272	21	22	8	0	51	642	12
Total	88	750	59	19	916	129	83	89	0	301	49	981	77	15	1122	106	99	33	0	238	2577	34
17:00	19	184	20	3	226	38	19	14	0	71	12	248	17	1	278	33	34	7	0	74	649	4
17:15	26	210	18	6	260	23	22	14	0	59	6	308	20	5	339	23	20	12	0	55	713	11
17:30	32	174	12	6	224	30	19	19	0	68	16	264	16	2	298	30	19	10	0	59	649	8
17:45	18	194	20	3	235	23	13	21	0	57	14	250	22	0	286	22	21	9	0	52	630	3
Total	95	762	70	18	945	114	73	68	0	255	48	1070	75	8	1201	108	94	38	0	240	2641	26
Grand Total	339	3197	235	124	3895	499	282	240	0	1021	128	3153	249	27	3557	352	282	126	0	760	9233	151
Apprch %	8.7%	82.1%	6.0%	3.2%		48.9%	27.6%	23.5%	0.0%		3.6%	88.6%	7.0%	0.8%		46.3%	37.1%	16.6%	0.0%			
Total %	3.7%	34.6%	2.5%	1.3%	42.2%	5.4%	3.1%	2.6%	0.0%	11.1%	1.4%	34.1%	2.7%	0.3%	38.5%	3.8%	3.1%	1.4%	0.0%	8.2%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-025 West Lane-Knickerbocker Drive.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					Knickerbocker Drive Westbound					West Lane Northbound					Knickerbocker Drive Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	9	226	15	10	260	33	13	2	0	48	2	176	11	0	189	17	5	10	0	32	529
07:45	22	251	16	26	315	41	24	8	0	73	3	149	19	0	171	19	12	7	0	38	597
08:00	21	198	11	21	251	48	31	12	0	91	5	185	25	0	215	20	22	10	0	52	609
08:15	25	252	8	3	288	57	23	15	0	95	8	128	11	1	148	21	16	5	0	42	573
Total Volume	77	927	50	60	1114	179	91	37	0	307	18	638	66	1	723	77	55	32	0	164	2308
% App Total	6.9%	83.2%	4.5%	5.4%		58.3%	29.6%	12.1%	0.0%		2.5%	88.2%	9.1%	0.1%		47.0%	33.5%	19.5%	0.0%		
PHF	.770	.920	.781	.577	.884	.785	.734	.617	.000	.808	.563	.862	.660	.250	.841	.917	.625	.800	.000	.788	.947

PM PEAK HOUR	West Lane Southbound					Knickerbocker Drive Westbound					West Lane Northbound					Knickerbocker Drive Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	24	204	14	8	250	31	18	20	0	69	16	230	22	4	272	21	22	8	0	51	642
17:00	19	184	20	3	226	38	19	14	0	71	12	248	17	1	278	33	34	7	0	74	649
17:15	26	210	18	6	260	23	22	14	0	59	6	308	20	5	339	23	20	12	0	55	713
17:30	32	174	12	6	224	30	19	19	0	68	16	264	16	2	298	30	19	10	0	59	649
Total Volume	101	772	64	23	960	122	78	67	0	267	50	1050	75	12	1187	107	95	37	0	239	2653
% App Total	10.5%	80.4%	6.7%	2.4%		45.7%	29.2%	25.1%	0.0%		4.2%	88.5%	6.3%	1.0%		44.8%	39.7%	15.5%	0.0%		
PHF	.789	.919	.800	.719	.923	.803	.886	.838	.000	.940	.781	.852	.852	.600	.875	.811	.699	.771	.000	.807	.930

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-026 West Lane-Hammer Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	West Lane Southbound					Hammer Lane Westbound					West Lane Northbound					Hammer Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	42	103	35	0	180	45	125	21	1	192	28	64	25	2	119	33	205	44	0	282	773	3
07:15	43	137	28	0	208	72	174	14	4	264	35	76	24	1	136	41	261	64	3	369	977	8
07:30	34	196	44	0	274	88	175	13	2	278	56	113	36	2	207	76	247	74	2	399	1158	6
07:45	37	216	49	0	302	107	183	11	4	305	58	102	22	1	183	62	238	78	4	382	1172	9
Total	156	652	156	0	964	312	657	59	11	1039	177	355	107	6	645	212	951	260	9	1432	4080	26
08:00	28	219	34	2	283	110	152	17	3	282	58	120	46	2	226	82	172	45	1	300	1091	8
08:15	43	243	50	3	339	87	141	10	1	239	54	100	22	7	183	54	200	46	2	302	1063	13
08:30	52	145	40	0	237	94	172	13	4	283	50	86	30	2	168	43	199	56	3	301	989	9
08:45	39	183	42	0	264	101	182	15	11	309	57	103	22	10	192	57	186	52	2	297	1062	23
Total	162	790	166	5	1123	392	647	55	19	1113	219	409	120	21	769	236	757	199	8	1200	4205	53
16:00	54	145	49	3	251	78	201	20	5	304	112	223	46	11	392	85	301	54	6	446	1393	25
16:15	49	134	45	4	232	106	245	16	7	374	101	202	39	16	358	101	276	46	11	434	1398	38
16:30	33	147	58	3	241	71	296	29	8	404	111	162	46	9	328	92	296	40	4	432	1405	24
16:45	53	162	54	3	272	98	248	31	12	389	97	185	53	13	348	88	258	52	3	401	1410	31
Total	189	588	206	13	996	353	990	96	32	1471	421	772	184	49	1426	366	1131	192	24	1713	5606	118
17:00	54	141	60	0	255	82	296	21	7	406	119	196	47	10	372	106	324	47	4	481	1514	21
17:15	60	161	52	1	274	79	278	24	12	393	122	237	54	13	426	103	318	50	8	479	1572	34
17:30	47	141	52	1	241	87	282	31	8	408	134	210	45	9	398	93	342	47	5	487	1534	23
17:45	50	162	51	3	266	68	233	26	14	341	84	201	42	4	331	67	306	52	4	429	1367	25
Total	211	605	215	5	1036	316	1089	102	41	1548	459	844	188	36	1527	369	1290	196	21	1876	5987	103
Grand Total	718	2635	743	23	4119	1373	3383	312	103	5171	1276	2380	599	112	4367	1183	4129	847	62	6221	19878	300
Apprch %	17.4%	64.0%	18.0%	0.6%		26.6%	65.4%	6.0%	2.0%		29.2%	54.5%	13.7%	2.6%		19.0%	66.4%	13.6%	1.0%			
Total %	3.6%	13.3%	3.7%	0.1%	20.7%	6.9%	17.0%	1.6%	0.5%	26.0%	6.4%	12.0%	3.0%	0.6%	22.0%	6.0%	20.8%	4.3%	0.3%	31.3%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-026 West Lane-Hammer Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	West Lane Southbound					Hammer Lane Westbound					West Lane Northbound					Hammer Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	34	196	44	0	274	88	175	13	2	278	56	113	36	2	207	76	247	74	2	399	1158
07:45	37	216	49	0	302	107	183	11	4	305	58	102	22	1	183	62	238	78	4	382	1172
08:00	28	219	34	2	283	110	152	17	3	282	58	120	46	2	226	82	172	45	1	300	1091
08:15	43	243	50	3	339	87	141	10	1	239	54	100	22	7	183	54	200	46	2	302	1063
Total Volume	142	874	177	5	1198	392	651	51	10	1104	226	435	126	12	799	274	857	243	9	1383	4484
% App Total	11.9%	73.0%	14.8%	0.4%		35.5%	59.0%	4.6%	0.9%		28.3%	54.4%	15.8%	1.5%		19.8%	62.0%	17.6%	0.7%		
PHF	.826	.899	.885	.417	.883	.891	.889	.750	.625	.905	.974	.906	.685	.429	.884	.835	.867	.779	.563	.867	.956

PM PEAK HOUR	West Lane Southbound					Hammer Lane Westbound					West Lane Northbound					Hammer Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	53	162	54	3	272	98	248	31	12	389	97	185	53	13	348	88	258	52	3	401	1410
17:00	54	141	60	0	255	82	296	21	7	406	119	196	47	10	372	106	324	47	4	481	1514
17:15	60	161	52	1	274	79	278	24	12	393	122	237	54	13	426	103	318	50	8	479	1572
17:30	47	141	52	1	241	87	282	31	8	408	134	210	45	9	398	93	342	47	5	487	1534
Total Volume	214	605	218	5	1042	346	1104	107	39	1596	472	828	199	45	1544	390	1242	196	20	1848	6030
% App Total	20.5%	58.1%	20.9%	0.5%		21.7%	69.2%	6.7%	2.4%		30.6%	53.6%	12.9%	2.9%		21.1%	67.2%	10.6%	1.1%		
PHF	.892	.934	.908	.417	.951	.883	.932	.863	.813	.978	.881	.873	.921	.865	.906	.920	.908	.942	.625	.949	.959

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-033 Holman Road-Hammer Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

START TIME	Holman Road Southbound					Hammer Lane Westbound					Holman Road Northbound					Hammer Lane Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
07:00	35	69	25	4	133	67	156	4	1	228	70	31	21	0	122	19	199	117	20	355	838	25
07:15	30	76	40	1	147	66	198	10	4	278	82	52	17	0	151	22	245	68	18	353	929	23
07:30	35	101	47	1	184	49	229	10	2	290	45	52	28	0	125	35	264	43	15	357	956	18
07:45	40	101	48	0	189	70	248	10	5	333	42	32	18	0	92	36	174	35	18	263	877	23
Total	140	347	160	6	653	252	831	34	12	1129	239	167	84	0	490	112	882	263	71	1328	3600	89
08:00	27	97	38	2	164	59	246	15	5	325	36	70	16	0	122	58	175	40	25	298	909	32
08:15	34	83	52	4	173	41	244	11	4	300	26	46	16	2	90	42	166	28	26	262	825	36
08:30	40	78	52	1	171	55	205	8	2	270	36	38	16	0	90	42	197	29	33	301	832	36
08:45	45	60	53	5	163	47	219	12	2	280	36	40	17	1	94	27	153	30	23	233	770	31
Total	146	318	195	12	671	202	914	46	13	1175	134	194	65	3	396	169	691	127	107	1094	3336	135
16:00	48	59	41	6	154	52	252	22	5	331	65	58	48	0	171	68	287	49	31	435	1091	42
16:15	66	59	44	9	178	39	256	28	9	332	73	84	41	1	199	75	272	38	41	426	1135	60
16:30	58	76	46	4	184	52	302	28	4	386	63	89	66	1	219	59	282	43	30	414	1203	39
16:45	76	71	53	7	207	33	261	24	7	325	63	113	39	2	217	85	284	33	47	449	1198	63
Total	248	265	184	26	723	176	1071	102	25	1374	264	344	194	4	806	287	1125	163	149	1724	4627	204
17:00	50	60	46	2	158	36	312	21	10	379	73	92	60	3	228	81	314	33	36	464	1229	51
17:15	60	62	45	5	172	41	301	25	8	375	67	109	43	2	221	95	313	34	52	494	1262	67
17:30	48	58	61	6	173	40	269	32	9	350	52	94	45	1	192	70	323	35	38	466	1181	54
17:45	69	59	45	5	178	46	238	21	9	314	70	92	27	0	189	94	256	31	51	432	1113	65
Total	227	239	197	18	681	163	1120	99	36	1418	262	387	175	6	830	340	1206	133	177	1856	4785	237
Grand Total	761	1169	736	62	2728	793	3936	281	86	5096	899	1092	518	13	2522	908	3904	686	504	6002	16348	665
Apprch %	27.9%	42.9%	27.0%	2.3%		15.6%	77.2%	5.5%	1.7%		35.6%	43.3%	20.5%	0.5%		15.1%	65.0%	11.4%	8.4%			
Total %	4.7%	7.2%	4.5%	0.4%	16.7%	4.9%	24.1%	1.7%	0.5%	31.2%	5.5%	6.7%	3.2%	0.1%	15.4%	5.6%	23.9%	4.2%	3.1%	36.7%	100.0%	

ALL TRAFFIC DATA

City of Stockton
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7398-033 Holman Road-Hammer Lane.ppd

Date : 5/7/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Holman Road Southbound					Hammer Lane Westbound					Holman Road Northbound					Hammer Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	30	76	40	1	147	66	198	10	4	278	82	52	17	0	151	22	245	68	18	353	929
07:30	35	101	47	1	184	49	229	10	2	290	45	52	28	0	125	35	264	43	15	357	956
07:45	40	101	48	0	189	70	248	10	5	333	42	32	18	0	92	36	174	35	18	263	877
08:00	27	97	38	2	164	59	246	15	5	325	36	70	16	0	122	58	175	40	25	298	909
Total Volume	132	375	173	4	684	244	921	45	16	1226	205	206	79	0	490	151	858	186	76	1271	3671
% App Total	19.3%	54.8%	25.3%	0.6%		19.9%	75.1%	3.7%	1.3%		41.8%	42.0%	16.1%	0.0%		11.9%	67.5%	14.6%	6.0%		
PHF	.825	.928	.901	.500	.905	.871	.928	.750	.800	.920	.625	.736	.705	.000	.811	.651	.813	.684	.760	.890	.960

PM PEAK HOUR	Holman Road Southbound					Hammer Lane Westbound					Holman Road Northbound					Hammer Lane Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	58	76	46	4	184	52	302	28	4	386	63	89	66	1	219	59	282	43	30	414	1203
16:45	76	71	53	7	207	33	261	24	7	325	63	113	39	2	217	85	284	33	47	449	1198
17:00	50	60	46	2	158	36	312	21	10	379	73	92	60	3	228	81	314	33	36	464	1229
17:15	60	62	45	5	172	41	301	25	8	375	67	109	43	2	221	95	313	34	52	494	1262
Total Volume	244	269	190	18	721	162	1176	98	29	1465	266	403	208	8	885	320	1193	143	165	1821	4892
% App Total	33.8%	37.3%	26.4%	2.5%		11.1%	80.3%	6.7%	2.0%		30.1%	45.5%	23.5%	0.9%		17.6%	65.5%	7.9%	9.1%		
PHF	.803	.885	.896	.643	.871	.779	.942	.875	.725	.949	.911	.892	.788	.667	.970	.842	.950	.831	.793	.922	.969

LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton SPECIFIC LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton CITY/STATE: San Joaquin, CA						QC JOB #: 14799527 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			51	63		57			57	
12:15 AM			38	31		35			35	
12:30 AM			30	39		35			35	
12:45 AM			34	33		34			34	
1:00 AM			19	25		22			22	
1:15 AM			26	22		24			24	
1:30 AM			28	21		25			25	
1:45 AM			32	18		25			25	
2:00 AM			27	21		24			24	
2:15 AM			17	32		25			25	
2:30 AM			35	30		33			33	
2:45 AM			28	23		26			26	
3:00 AM			39	37		38			38	
3:15 AM			54	39		47			47	
3:30 AM			55	61		58			58	
3:45 AM			77	55		66			66	
4:00 AM			54	64		59			59	
4:15 AM			78	69		74			74	
4:30 AM			93	103		98			98	
4:45 AM			95	103		99			99	
5:00 AM			116	121		119			119	
5:15 AM			131	167		149			149	
5:30 AM			153	154		154			154	
5:45 AM			213	179		196			196	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton SPECIFIC LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton CITY/STATE: San Joaquin, CA						QC JOB #: 14799527 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			210	213		212			212	
6:15 AM			223	258		241			241	
6:30 AM			292	289		291			291	
6:45 AM			358	381		370			370	
7:00 AM			450	451		451			451	
7:15 AM			478	476		477			477	
7:30 AM			470	483		477			477	
7:45 AM			457	452		455			455	
8:00 AM			398	385		392			392	
8:15 AM			369	374		372			372	
8:30 AM			340	365		353			353	
8:45 AM			309	330		320			320	
9:00 AM			265	316		291			291	
9:15 AM			234	284		259			259	
9:30 AM			251	276		264			264	
9:45 AM			225	263		244			244	
10:00 AM			275	267		271			271	
10:15 AM			255	240		248			248	
10:30 AM			260	273		267			267	
10:45 AM			283	273		278			278	
11:00 AM			263	261		262			262	
11:15 AM			256	271		264			264	
11:30 AM			279	306		293			293	
11:45 AM			321	321		321			321	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton SPECIFIC LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton CITY/STATE: San Joaquin, CA						QC JOB #: 14799527 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			361	318		340			340	
12:15 PM			319	306		313			313	
12:30 PM			377	299		338			338	
12:45 PM			368	295		332			332	
1:00 PM			348	327		338			338	
1:15 PM			320	282		301			301	
1:30 PM			320	348		334			334	
1:45 PM			333	332		333			333	
2:00 PM			369	372		371			371	
2:15 PM			406	441		424			424	
2:30 PM			397	451		424			424	
2:45 PM			412	417		415			415	
3:00 PM			386	421		404			404	
3:15 PM			380	438		409			409	
3:30 PM			482	440		461			461	
3:45 PM			398	436		417			417	
4:00 PM			428	452		440			440	
4:15 PM			433	444		439			439	
4:30 PM			482	433		458			458	
4:45 PM			463	459		461			461	
5:00 PM			482	503		493			493	
5:15 PM			528	501		515			515	
5:30 PM			464	461		463			463	
5:45 PM			459	525		492			492	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton SPECIFIC LOCATION: 27 - Eight Mile Rd btwn I-5 and Thornton CITY/STATE: San Joaquin, CA						QC JOB #: 14799527 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			400	462		431			431	
6:15 PM			393	430		412			412	
6:30 PM			403	368		386			386	
6:45 PM			381	328		355			355	
7:00 PM			352	363		358			358	
7:15 PM			336	367		352			352	
7:30 PM			356	371		364			364	
7:45 PM			275	357		316			316	
8:00 PM			290	314		302			302	
8:15 PM			253	308		281			281	
8:30 PM			279	286		283			283	
8:45 PM			228	256		242			242	
9:00 PM			196	264		230			230	
9:15 PM			195	217		206			206	
9:30 PM			172	192		182			182	
9:45 PM			182	160		171			171	
10:00 PM			124	125		125			125	
10:15 PM			136	122		129			129	
10:30 PM			121	126		124			124	
10:45 PM			98	120		109			109	
11:00 PM			89	87		88			88	
11:15 PM			69	88		79			79	
11:30 PM			68	68		68			68	
11:45 PM			64	64		64			64	
Day Total			24219	24862		24567			24567	
% Weekday Average			98.6%	101.2%						
% Week Average			98.6%	101.2%		100.0%				
AM Peak			7:15 AM	7:30 AM		7:15 AM			7:15 AM	
Volume			478	483		477			477	
PM Peak			5:15 PM	5:45 PM		5:15 PM			5:15 PM	
Volume			528	525		515			515	
<i>Comments:</i>										

LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento SPECIFIC LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento CITY/STATE: San Joaquin, CA						QC JOB #: 14799528 DIRECTION: EB/WB DATE: Oct 23 2018 - Oct 25 2018				
Start Time	Mon 23-Oct-18	Tue 24-Oct-18	Wed 25-Oct-18	Thu 25-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			35	37		36			36	
12:15 AM			31	38		35			35	
12:30 AM			18	30		24			24	
12:45 AM			32	33		33			33	
1:00 AM			17	21		19			19	
1:15 AM			18	18		18			18	
1:30 AM			23	15		19			19	
1:45 AM			21	18		20			20	
2:00 AM			13	20		17			17	
2:15 AM			26	17		22			22	
2:30 AM			15	21		18			18	
2:45 AM			18	25		22			22	
3:00 AM			18	33		26			26	
3:15 AM			37	32		35			35	
3:30 AM			37	45		41			41	
3:45 AM			46	52		49			49	
4:00 AM			61	40		51			51	
4:15 AM			46	44		45			45	
4:30 AM			54	77		66			66	
4:45 AM			57	60		59			59	
5:00 AM			82	67		75			75	
5:15 AM			73	107		90			90	
5:30 AM			130	107		119			119	
5:45 AM			148	144		146			146	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento SPECIFIC LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento CITY/STATE: San Joaquin, CA						QC JOB #: 14799528 DIRECTION: EB/WB DATE: Oct 23 2018 - Oct 25 2018				
Start Time	Mon 23-Oct-18	Tue 24-Oct-18	Wed 25-Oct-18	Thu 25-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			129	161		145			145	
6:15 AM			186	161		174			174	
6:30 AM			207	230		219			219	
6:45 AM			266	259		263			263	
7:00 AM			335	326		331			331	
7:15 AM			325	333		329			329	
7:30 AM			330	300		315			315	
7:45 AM			303	352		328			328	
8:00 AM			291	283		287			287	
8:15 AM			290	301		296			296	
8:30 AM			267	247		257			257	
8:45 AM			262	274		268			268	
9:00 AM			200	210		205			205	
9:15 AM			187	210		199			199	
9:30 AM			163	200		182			182	
9:45 AM			210	205		208			208	
10:00 AM			193	180		187			187	
10:15 AM			197	199		198			198	
10:30 AM			197	205		201			201	
10:45 AM			188	245		217			217	
11:00 AM			212	229		221			221	
11:15 AM			224	220		222			222	
11:30 AM			248	245		247			247	
11:45 AM			255	240		248			248	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento
SPECIFIC LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento
CITY/STATE: San Joaquin, CA

QC JOB #: 14799528
DIRECTION: EB/WB
DATE: Oct 23 2018 - Oct 25 2018

Start Time	Mon 23-Oct-18	Tue 24-Oct-18	Wed 24-Oct-18	Thu 25-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			330	250		290			290	
12:15 PM			296	241		269			269	
12:30 PM			310	261		286			286	
12:45 PM			339	257		298			298	
1:00 PM			294	280		287			287	
1:15 PM			308	255		282			282	
1:30 PM			320	277		299			299	
1:45 PM			295	283		289			289	
2:00 PM			293	283		288			288	
2:15 PM			261	392		327			327	
2:30 PM			274	365		320			320	
2:45 PM			346	393		370			370	
3:00 PM			303	348		326			326	
3:15 PM			332	372		352			352	
3:30 PM			345	351		348			348	
3:45 PM			329	348		339			339	
4:00 PM			329	364		347			347	
4:15 PM			359	390		375			375	
4:30 PM			364	358		361			361	
4:45 PM			377	415		396			396	
5:00 PM			350	363		357			357	
5:15 PM			390	435		413			413	
5:30 PM			376	384		380			380	
5:45 PM			358	431		395			395	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento SPECIFIC LOCATION: 28 - Eight Mile Rd btwn Thornton and Lower Sacramento CITY/STATE: San Joaquin, CA							QC JOB #: 14799528 DIRECTION: EB/WB DATE: Oct 23 2018 - Oct 25 2018			
Start Time	Mon 23-Oct-18	Tue 24-Oct-18	Wed 24-Oct-18	Thu 25-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			345	426		386			386	
6:15 PM			321	371		346			346	
6:30 PM			322	332		327			327	
6:45 PM			271	320		296			296	
7:00 PM			283	279		281			281	
7:15 PM			245	256		251			251	
7:30 PM			219	220		220			220	
7:45 PM			207	229		218			218	
8:00 PM			178	189		184			184	
8:15 PM			205	232		219			219	
8:30 PM			181	181		181			181	
8:45 PM			143	180		162			162	
9:00 PM			150	175		163			163	
9:15 PM			146	170		158			158	
9:30 PM			128	157		143			143	
9:45 PM			111	114		113			113	
10:00 PM		111	103			107			107	
10:15 PM		70	93			82			82	
10:30 PM		94	97			96			96	
10:45 PM		62	92			77			77	
11:00 PM		78	62			70			70	
11:15 PM		66	62			64			64	
11:30 PM		49	49			49			49	
11:45 PM		35	45			40			40	
Day Total		565	18657	18843		19059			19059	
% Weekday Average		3.0%	97.9%	98.9%						
% Week Average		3.0%	97.9%	98.9%		100.0%				
AM Peak			7:00 AM	7:45 AM		7:00 AM			7:00 AM	
Volume			335	352		331			331	
PM Peak		10:00 PM	5:15 PM	5:15 PM		5:15 PM			5:15 PM	
Volume		111	390	435		413			413	
<i>Comments:</i>										

LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West SPECIFIC LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West CITY/STATE: Stockton, CA						QC JOB #: 14799529 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			57	56		57			57	
12:15 AM			36	47		42			42	
12:30 AM			37	32		35			35	
12:45 AM			39	35		37			37	
1:00 AM			26	30		28			28	
1:15 AM			26	25		26			26	
1:30 AM			27	19		23			23	
1:45 AM			29	29		29			29	
2:00 AM			26	26		26			26	
2:15 AM			27	26		27			27	
2:30 AM			19	14		17			17	
2:45 AM			35	18		27			27	
3:00 AM			24	20		22			22	
3:15 AM			34	31		33			33	
3:30 AM			44	50		47			47	
3:45 AM			40	36		38			38	
4:00 AM			35	48		42			42	
4:15 AM			63	63		63			63	
4:30 AM			64	76		70			70	
4:45 AM			92	94		93			93	
5:00 AM			83	91		87			87	
5:15 AM			129	134		132			132	
5:30 AM			162	137		150			150	
5:45 AM			204	211		208			208	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West SPECIFIC LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West CITY/STATE: Stockton, CA						QC JOB #: 14799529 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			168	159		164			164	
6:15 AM			239	214		227			227	
6:30 AM			268	303		286			286	
6:45 AM			328	358		343			343	
7:00 AM			364	349		357			357	
7:15 AM			406	412		409			409	
7:30 AM			342	397		370			370	
7:45 AM			361	392		377			377	
8:00 AM			341	358		350			350	
8:15 AM			361	378		370			370	
8:30 AM			325	345		335			335	
8:45 AM			291	359		325			325	
9:00 AM			235	264		250			250	
9:15 AM			214	266		240			240	
9:30 AM			259	254		257			257	
9:45 AM			230	263		247			247	
10:00 AM			240	207		224			224	
10:15 AM			226	226		226			226	
10:30 AM			261	265		263			263	
10:45 AM			285	283		284			284	
11:00 AM			263	255		259			259	
11:15 AM			266	273		270			270	
11:30 AM			276	252		264			264	
11:45 AM			325	327		326			326	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West SPECIFIC LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West CITY/STATE: Stockton, CA							QC JOB #: 14799529 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			316	276		296			296	
12:15 PM			331	264		298			298	
12:30 PM			321	292		307			307	
12:45 PM			380	251		316			316	
1:00 PM			341	265		303			303	
1:15 PM			347	297		322			322	
1:30 PM			342	273		308			308	
1:45 PM			354	353		354			354	
2:00 PM			316	354		335			335	
2:15 PM			335	348		342			342	
2:30 PM			376	434		405			405	
2:45 PM			349	423		386			386	
3:00 PM			398	409		404			404	
3:15 PM			367	383		375			375	
3:30 PM			334	364		349			349	
3:45 PM			383	422		403			403	
4:00 PM			351	382		367			367	
4:15 PM			399	424		412			412	
4:30 PM			371	417		394			394	
4:45 PM			436	412		424			424	
5:00 PM			393	404		399			399	
5:15 PM			415	457		436			436	
5:30 PM			398	395		397			397	
5:45 PM			378	432		405			405	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West SPECIFIC LOCATION: 29 - Eight Mile Rd btwn Lower Sacramento and West CITY/STATE: Stockton, CA						QC JOB #: 14799529 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			379	367		373			373	
6:15 PM			330	365		348			348	
6:30 PM			313	305		309			309	
6:45 PM			371	335		353			353	
7:00 PM			338	331		335			335	
7:15 PM			320	296		308			308	
7:30 PM			286	328		307			307	
7:45 PM			260	300		280			280	
8:00 PM			247	294		271			271	
8:15 PM			273	279		276			276	
8:30 PM			238	230		234			234	
8:45 PM			212	214		213			213	
9:00 PM			196	181		189			189	
9:15 PM			172	193		183			183	
9:30 PM			168	167		168			168	
9:45 PM			133	155		144			144	
10:00 PM			108	136		122			122	
10:15 PM			97	108		103			103	
10:30 PM			102	110		106			106	
10:45 PM			90	96		93			93	
11:00 PM			80	86		83			83	
11:15 PM			71	60		66			66	
11:30 PM			60	71		66			66	
11:45 PM			55	50		53			53	
Day Total			21862	22295		22102			22102	
% Weekday Average			98.9%	100.9%						
% Week Average			98.9%	100.9%		100.0%				
AM Peak			7:15 AM	7:15 AM		7:15 AM			7:15 AM	
Volume			406	412		409			409	
PM Peak			4:45 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			436	457		436			436	
<i>Comments:</i>										

LOCATION: 30 - Eight Mile Rd btwn West and SR-99 SPECIFIC LOCATION: 30 - Eight Mile Rd btwn West and SR-99 CITY/STATE: San Joaquin, CA						QC JOB #: 14799530 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			28	22		25			25	
12:15 AM			19	28		24			24	
12:30 AM			13	25		19			19	
12:45 AM			22	19		21			21	
1:00 AM			16	15		16			16	
1:15 AM			13	15		14			14	
1:30 AM			14	10		12			12	
1:45 AM			20	21		21			21	
2:00 AM			12	17		15			15	
2:15 AM			20	19		20			20	
2:30 AM			12	11		12			12	
2:45 AM			18	12		15			15	
3:00 AM			14	14		14			14	
3:15 AM			21	12		17			17	
3:30 AM			22	25		24			24	
3:45 AM			21	20		21			21	
4:00 AM			24	31		28			28	
4:15 AM			41	45		43			43	
4:30 AM			47	44		46			46	
4:45 AM			67	69		68			68	
5:00 AM			62	59		61			61	
5:15 AM			97	84		91			91	
5:30 AM			103	86		95			95	
5:45 AM			157	154		156			156	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 30 - Eight Mile Rd btwn West and SR-99 SPECIFIC LOCATION: 30 - Eight Mile Rd btwn West and SR-99 CITY/STATE: San Joaquin, CA						QC JOB #: 14799530 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			123	115		119			119	
6:15 AM			159	146		153			153	
6:30 AM			163	183		173			173	
6:45 AM			243	257		250			250	
7:00 AM			230	223		227			227	
7:15 AM			213	240		227			227	
7:30 AM			207	227		217			217	
7:45 AM			229	240		235			235	
8:00 AM			200	210		205			205	
8:15 AM			206	225		216			216	
8:30 AM			196	188		192			192	
8:45 AM			184	219		202			202	
9:00 AM			158	154		156			156	
9:15 AM			139	166		153			153	
9:30 AM			149	186		168			168	
9:45 AM			142	161		152			152	
10:00 AM			140	140		140			140	
10:15 AM			134	129		132			132	
10:30 AM			143	138		141			141	
10:45 AM			158	147		153			153	
11:00 AM			135	142		139			139	
11:15 AM			157	164		161			161	
11:30 AM			153	134		144			144	
11:45 AM			188	188		188			188	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 30 - Eight Mile Rd btwn West and SR-99 SPECIFIC LOCATION: 30 - Eight Mile Rd btwn West and SR-99 CITY/STATE: San Joaquin, CA						QC JOB #: 14799530 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			182	166		174			174	
12:15 PM			172	163		168			168	
12:30 PM			162	162		162			162	
12:45 PM			185	146		166			166	
1:00 PM			189	151		170			170	
1:15 PM			163	174		169			169	
1:30 PM			201	186		194			194	
1:45 PM			181	185		183			183	
2:00 PM			190	195		193			193	
2:15 PM			196	207		202			202	
2:30 PM			179	226		203			203	
2:45 PM			224	231		228			228	
3:00 PM			192	234		213			213	
3:15 PM			209	216		213			213	
3:30 PM			223	213		218			218	
3:45 PM			241	231		236			236	
4:00 PM			229	244		237			237	
4:15 PM			232	212		222			222	
4:30 PM			207	217		212			212	
4:45 PM			220	210		215			215	
5:00 PM			243	227		235			235	
5:15 PM			233	260		247			247	
5:30 PM			219	217		218			218	
5:45 PM			211	209		210			210	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 30 - Eight Mile Rd btwn West and SR-99 SPECIFIC LOCATION: 30 - Eight Mile Rd btwn West and SR-99 CITY/STATE: San Joaquin, CA						QC JOB #: 14799530 DIRECTION: EB/WB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			203	205		204			204	
6:15 PM			188	187		188			188	
6:30 PM			175	182		179			179	
6:45 PM			174	194		184			184	
7:00 PM			168	178		173			173	
7:15 PM			177	161		169			169	
7:30 PM			156	170		163			163	
7:45 PM			131	166		149			149	
8:00 PM			120	162		141			141	
8:15 PM			144	162		153			153	
8:30 PM			119	126		123			123	
8:45 PM			129	107		118			118	
9:00 PM			81	100		91			91	
9:15 PM			100	103		102			102	
9:30 PM			81	86		84			84	
9:45 PM			63	78		71			71	
10:00 PM			70	64		67			67	
10:15 PM			58	67		63			63	
10:30 PM			45	59		52			52	
10:45 PM			56	55		56			56	
11:00 PM			45	45		45			45	
11:15 PM			49	33		41			41	
11:30 PM			26	38		32			32	
11:45 PM			34	30		32			32	
Day Total			12507	12819		12689			12689	
% Weekday Average			98.6%	101.0%						
% Week Average			98.6%	101.0%		100.0%				
AM Peak			6:45 AM	6:45 AM		6:45 AM			6:45 AM	
Volume			243	257		250			250	
PM Peak			5:00 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			243	260		247			247	
<i>Comments:</i>										

LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile SPECIFIC LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile CITY/STATE: San Joaquin, CA							QC JOB #: 14799577 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			15	34		25			25	
12:15 AM			24	21		23			23	
12:30 AM			12	17		15			15	
12:45 AM			5	10		8			8	
1:00 AM			12	10		11			11	
1:15 AM			3	11		7			7	
1:30 AM			10	9		10			10	
1:45 AM			8	9		9			9	
2:00 AM			10	12		11			11	
2:15 AM			6	11		9			9	
2:30 AM			11	9		10			10	
2:45 AM			8	7		8			8	
3:00 AM			6	8		7			7	
3:15 AM			12	9		11			11	
3:30 AM			9	8		9			9	
3:45 AM			22	17		20			20	
4:00 AM			15	10		13			13	
4:15 AM			22	14		18			18	
4:30 AM			23	24		24			24	
4:45 AM			30	28		29			29	
5:00 AM			36	28		32			32	
5:15 AM			43	48		46			46	
5:30 AM			57	57		57			57	
5:45 AM			83	71		77			77	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile SPECIFIC LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile CITY/STATE: San Joaquin, CA							QC JOB #: 14799577 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			77	70		74			74	
6:15 AM			92	86		89			89	
6:30 AM			131	118		125			125	
6:45 AM			172	162		167			167	
7:00 AM			183	187		185			185	
7:15 AM			203	221		212			212	
7:30 AM			247	274		261			261	
7:45 AM			258	260		259			259	
8:00 AM			243	236		240			240	
8:15 AM			196	223		210			210	
8:30 AM			213	187		200			200	
8:45 AM			201	180		191			191	
9:00 AM			177	166		172			172	
9:15 AM			113	138		126			126	
9:30 AM			181	193		187			187	
9:45 AM			157	209		183			183	
10:00 AM			175	169		172			172	
10:15 AM			152	167		160			160	
10:30 AM			187	211		199			199	
10:45 AM			210	195		203			203	
11:00 AM			197	156		177			177	
11:15 AM			198	179		189			189	
11:30 AM			195	186		191			191	
11:45 AM			242	203		223			223	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile SPECIFIC LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile CITY/STATE: San Joaquin, CA							QC JOB #: 14799577 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			202	188		195			195	
12:15 PM			202	201		202			202	
12:30 PM			218	200		209			209	
12:45 PM			223	222		223			223	
1:00 PM			201	192		197			197	
1:15 PM			208	178		193			193	
1:30 PM			206	234		220			220	
1:45 PM			214	209		212			212	
2:00 PM			214	244		229			229	
2:15 PM			222	238		230			230	
2:30 PM			234	209		222			222	
2:45 PM			232	255		244			244	
3:00 PM			214	235		225			225	
3:15 PM			211	248		230			230	
3:30 PM			217	234		226			226	
3:45 PM			242	238		240			240	
4:00 PM			237	204		221			221	
4:15 PM			217	237		227			227	
4:30 PM			253	222		238			238	
4:45 PM			296	267		282			282	
5:00 PM			260	256		258			258	
5:15 PM			283	278		281			281	
5:30 PM			270	268		269			269	
5:45 PM			247	235		241			241	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile SPECIFIC LOCATION: 77 - Lower Sacramento Rd btwn Armstrong and Eight Mile CITY/STATE: San Joaquin, CA						QC JOB #: 14799577 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			224	223		224			224	
6:15 PM			190	230		210			210	
6:30 PM			192	195		194			194	
6:45 PM			209	151		180			180	
7:00 PM			169	188		179			179	
7:15 PM			157	184		171			171	
7:30 PM			165	151		158			158	
7:45 PM			183	162		173			173	
8:00 PM			156	149		153			153	
8:15 PM			129	136		133			133	
8:30 PM			143	121		132			132	
8:45 PM			120	120		120			120	
9:00 PM			103	131		117			117	
9:15 PM			94	105		100			100	
9:30 PM			88	90		89			89	
9:45 PM			84	74		79			79	
10:00 PM			73	88		81			81	
10:15 PM			58	46		52			52	
10:30 PM			67	54		61			61	
10:45 PM			60	50		55			55	
11:00 PM			43	52		48			48	
11:15 PM			33	52		43			43	
11:30 PM			42	44		43			43	
11:45 PM			22	35		29			29	
Day Total			13209	13181		13222			13222	
% Weekday Average			99.9%	99.7%						
% Week Average			99.9%	99.7%		100.0%				
AM Peak			7:45 AM	7:30 AM		7:30 AM			7:30 AM	
Volume			258	274		261			261	
PM Peak			4:45 PM	5:15 PM		4:45 PM			4:45 PM	
Volume			296	278		282			282	
<i>Comments:</i>										

LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks SPECIFIC LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks CITY/STATE: San Joaquin, CA							QC JOB #: 14799578 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			25	35		30			30	
12:15 AM			36	24		30			30	
12:30 AM			20	25		23			23	
12:45 AM			20	16		18			18	
1:00 AM			12	16		14			14	
1:15 AM			15	14		15			15	
1:30 AM			15	12		14			14	
1:45 AM			19	24		22			22	
2:00 AM			13	18		16			16	
2:15 AM			16	13		15			15	
2:30 AM			10	13		12			12	
2:45 AM			15	11		13			13	
3:00 AM			11	12		12			12	
3:15 AM			13	12		13			13	
3:30 AM			17	19		18			18	
3:45 AM			27	19		23			23	
4:00 AM			24	21		23			23	
4:15 AM			36	37		37			37	
4:30 AM			36	42		39			39	
4:45 AM			49	48		49			49	
5:00 AM			51	56		54			54	
5:15 AM			64	63		64			64	
5:30 AM			94	85		90			90	
5:45 AM			114	111		113			113	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks SPECIFIC LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks CITY/STATE: San Joaquin, CA							QC JOB #: 14799578 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			112	106		109			109	
6:15 AM			138	127		133			133	
6:30 AM			172	163		168			168	
6:45 AM			198	214		206			206	
7:00 AM			234	218		226			226	
7:15 AM			287	291		289			289	
7:30 AM			329	368		349			349	
7:45 AM			338	332		335			335	
8:00 AM			300	293		297			297	
8:15 AM			258	264		261			261	
8:30 AM			253	235		244			244	
8:45 AM			229	227		228			228	
9:00 AM			225	219		222			222	
9:15 AM			139	190		165			165	
9:30 AM			205	230		218			218	
9:45 AM			185	225		205			205	
10:00 AM			186	173		180			180	
10:15 AM			162	213		188			188	
10:30 AM			212	237		225			225	
10:45 AM			230	238		234			234	
11:00 AM			219	210		215			215	
11:15 AM			231	217		224			224	
11:30 AM			235	218		227			227	
11:45 AM			275	249		262			262	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks SPECIFIC LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks CITY/STATE: San Joaquin, CA							QC JOB #: 14799578 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			247	229		238			238	
12:15 PM			231	219		225			225	
12:30 PM			270	243		257			257	
12:45 PM			241	224		233			233	
1:00 PM			237	216		227			227	
1:15 PM			246	224		235			235	
1:30 PM			260	258		259			259	
1:45 PM			259	283		271			271	
2:00 PM			234	280		257			257	
2:15 PM			248	277		263			263	
2:30 PM			272	306		289			289	
2:45 PM			275	295		285			285	
3:00 PM			256	261		259			259	
3:15 PM			276	311		294			294	
3:30 PM			274	283		279			279	
3:45 PM			292	267		280			280	
4:00 PM			303	274		289			289	
4:15 PM			300	279		290			290	
4:30 PM			282	276		279			279	
4:45 PM			361	290		326			326	
5:00 PM			310	314		312			312	
5:15 PM			349	365		357			357	
5:30 PM			309	308		309			309	
5:45 PM			311	263		287			287	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks SPECIFIC LOCATION: 78 - Lower Sacramento Rd btwn Eight Mile and Royal Oaks CITY/STATE: San Joaquin, CA							QC JOB #: 14799578 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			271	265		268			268	
6:15 PM			243	259		251			251	
6:30 PM			219	228		224			224	
6:45 PM			248	229		239			239	
7:00 PM			196	220		208			208	
7:15 PM			215	195		205			205	
7:30 PM			189	188		189			189	
7:45 PM			177	200		189			189	
8:00 PM			179	199		189			189	
8:15 PM			192	153		173			173	
8:30 PM			160	147		154			154	
8:45 PM			157	152		155			155	
9:00 PM			160	133		147			147	
9:15 PM			115	123		119			119	
9:30 PM			90	98		94			94	
9:45 PM			90	85		88			88	
10:00 PM			71	96		84			84	
10:15 PM			57	60		59			59	
10:30 PM			56	72		64			64	
10:45 PM			73	72		73			73	
11:00 PM			56	57		57			57	
11:15 PM			43	46		45			45	
11:30 PM			40	57		49			49	
11:45 PM			38	32		35			35	
Day Total			16082	16114		16125			16125	
% Weekday Average			99.7%	99.9%						
% Week Average			99.7%	99.9%		100.0%				
AM Peak			7:45 AM	7:30 AM		7:30 AM			7:30 AM	
Volume			338	368		349			349	
PM Peak			4:45 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			361	365		357			357	
<i>Comments:</i>										

LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile SPECIFIC LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile CITY/STATE: San Joaquin, CA						QC JOB #: 14799608 DIRECTION: NB/SB DATE: Sep 12 2018 - Sep 13 2018				
Start Time	Mon	Tue	Wed 12-Sep-18	Thu 13-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			11	4		8			8	
12:15 AM			10	5		8			8	
12:30 AM			9	7		8			8	
12:45 AM			10	4		7			7	
1:00 AM			6	1		4			4	
1:15 AM			18	4		11			11	
1:30 AM			14	2		8			8	
1:45 AM			8	2		5			5	
2:00 AM			10	2		6			6	
2:15 AM			9	1		5			5	
2:30 AM			11	5		8			8	
2:45 AM			14	3		9			9	
3:00 AM			15	5		10			10	
3:15 AM			17	6		12			12	
3:30 AM			13	11		12			12	
3:45 AM			10	10		10			10	
4:00 AM			15	5		10			10	
4:15 AM			24	15		20			20	
4:30 AM			20	15		18			18	
4:45 AM			15	15		15			15	
5:00 AM			16	15		16			16	
5:15 AM			19	15		17			17	
5:30 AM			26	21		24			24	
5:45 AM			19	30		25			25	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile SPECIFIC LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile CITY/STATE: San Joaquin, CA						QC JOB #: 14799608 DIRECTION: NB/SB DATE: Sep 12 2018 - Sep 13 2018				
Start Time	Mon	Tue	Wed 12-Sep-18	Thu 13-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			19	20		20			20	
6:15 AM			37	27		32			32	
6:30 AM			25	29		27			27	
6:45 AM			26	22		24			24	
7:00 AM			25	24		25			25	
7:15 AM			23	26		25			25	
7:30 AM			31	24		28			28	
7:45 AM			28	33		31			31	
8:00 AM			31	27		29			29	
8:15 AM			16	14		15			15	
8:30 AM			28	21		25			25	
8:45 AM			24	21		23			23	
9:00 AM			20	19		20			20	
9:15 AM			16	19		18			18	
9:30 AM			22	23		23			23	
9:45 AM			19	19		19			19	
10:00 AM			14	12		13			13	
10:15 AM			8	11		10			10	
10:30 AM			13	16		15			15	
10:45 AM			24	29		27			27	
11:00 AM			13	20		17			17	
11:15 AM			17	9		13			13	
11:30 AM			21	17		19			19	
11:45 AM			29	24		27			27	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile SPECIFIC LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile CITY/STATE: San Joaquin, CA						QC JOB #: 14799608 DIRECTION: NB/SB DATE: Sep 12 2018 - Sep 13 2018				
Start Time	Mon	Tue	Wed 12-Sep-18	Thu 13-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			17	21		19			19	
12:15 PM			13	21		17			17	
12:30 PM			19	29		24			24	
12:45 PM			21	20		21			21	
1:00 PM			21	19		20			20	
1:15 PM			21	20		21			21	
1:30 PM			19	28		24			24	
1:45 PM			26	18		22			22	
2:00 PM			20	23		22			22	
2:15 PM			17	20		19			19	
2:30 PM			31	28		30			30	
2:45 PM			30	34		32			32	
3:00 PM			47	32		40			40	
3:15 PM			37	25		31			31	
3:30 PM			29	42		36			36	
3:45 PM			42	27		35			35	
4:00 PM			45	26		36			36	
4:15 PM			36	19		28			28	
4:30 PM			40	24		32			32	
4:45 PM			27	34		31			31	
5:00 PM			44	22		33			33	
5:15 PM			26	29		28			28	
5:30 PM			28	22		25			25	
5:45 PM			19	14		17			17	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile SPECIFIC LOCATION: 107 - Thornton Rd btwn Kindon and Eight Mile CITY/STATE: San Joaquin, CA						QC JOB #: 14799608 DIRECTION: NB/SB DATE: Sep 12 2018 - Sep 13 2018				
Start Time	Mon	Tue	Wed 12-Sep-18	Thu 13-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			23	15		19			19	
6:15 PM			20	23		22			22	
6:30 PM			20	21		21			21	
6:45 PM			16	19		18			18	
7:00 PM			9	21		15			15	
7:15 PM			16	19		18			18	
7:30 PM			21	10		16			16	
7:45 PM			15	13		14			14	
8:00 PM			16	22		19			19	
8:15 PM			13	9		11			11	
8:30 PM			7	10		9			9	
8:45 PM			8	8		8			8	
9:00 PM			7	9		8			8	
9:15 PM			10	13		12			12	
9:30 PM			7	8		8			8	
9:45 PM			9	5		7			7	
10:00 PM			13	10		12			12	
10:15 PM			13	12		13			13	
10:30 PM			8	4		6			6	
10:45 PM			9	7		8			8	
11:00 PM			13	7		10			10	
11:15 PM			10	7		9			9	
11:30 PM			4	2		3			3	
11:45 PM			3	9		6			6	
Day Total			1833	1589		1736			1736	
% Weekday Average			105.6%	91.5%						
% Week Average			105.6%	91.5%		100.0%				
AM Peak			6:15 AM	7:45 AM		6:15 AM			6:15 AM	
Volume			37	33		32			32	
PM Peak			3:00 PM	3:30 PM		3:00 PM			3:00 PM	
Volume			47	42		40			40	
<i>Comments:</i>										

LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing SPECIFIC LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing CITY/STATE: San Joaquin, CA							QC JOB #: 14799609 DIRECTION: NB/SB DATE: Sep 25 2018 - Sep 26 2018			
Start Time	Mon 25-Sep-18	Tue 26-Sep-18	Wed 26-Sep-18	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		22	27			25			25	
12:15 AM		15	15			15			15	
12:30 AM		17	18			18			18	
12:45 AM		11	19			15			15	
1:00 AM		15	17			16			16	
1:15 AM		12	16			14			14	
1:30 AM		9	15			12			12	
1:45 AM		16	8			12			12	
2:00 AM		14	6			10			10	
2:15 AM		15	14			15			15	
2:30 AM		12	17			15			15	
2:45 AM		10	12			11			11	
3:00 AM		8	11			10			10	
3:15 AM		5	11			8			8	
3:30 AM		18	15			17			17	
3:45 AM		13	22			18			18	
4:00 AM		17	17			17			17	
4:15 AM		21	26			24			24	
4:30 AM		24	20			22			22	
4:45 AM		34	34			34			34	
5:00 AM		35	39			37			37	
5:15 AM		41	50			46			46	
5:30 AM		53	49			51			51	
5:45 AM		75	81			78			78	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing SPECIFIC LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing CITY/STATE: San Joaquin, CA							QC JOB #: 14799609 DIRECTION: NB/SB DATE: Sep 25 2018 - Sep 26 2018			
Start Time	Mon 25-Sep-18	Tue 26-Sep-18	Wed 26-Sep-18	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM		76	79			78			78	
6:15 AM		101	111			106			106	
6:30 AM		152	132			142			142	
6:45 AM		276	266			271			271	
7:00 AM		340	324			332			332	
7:15 AM		250	265			258			258	
7:30 AM		226	231			229			229	
7:45 AM		303	288			296			296	
8:00 AM		284	294			289			289	
8:15 AM		251	276			264			264	
8:30 AM		221	251			236			236	
8:45 AM		246	233			240			240	
9:00 AM		205	190			198			198	
9:15 AM		166	172			169			169	
9:30 AM		190	207			199			199	
9:45 AM		204	194			199			199	
10:00 AM		196	200			198			198	
10:15 AM		213	215			214			214	
10:30 AM		204	218			211			211	
10:45 AM		190	194			192			192	
11:00 AM		214	207			211			211	
11:15 AM		212	217			215			215	
11:30 AM		205	219			212			212	
11:45 AM		237	253			245			245	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing SPECIFIC LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing CITY/STATE: San Joaquin, CA							QC JOB #: 14799609 DIRECTION: NB/SB DATE: Sep 25 2018 - Sep 26 2018			
Start Time	Mon 25-Sep-18	Tue 26-Sep-18	Wed 26-Sep-18	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM		259	255			257			257	
12:15 PM		247	266			257			257	
12:30 PM		261	280			271			271	
12:45 PM		241	269			255			255	
1:00 PM		237	233			235			235	
1:15 PM		219	207			213			213	
1:30 PM		222	234			228			228	
1:45 PM		224	241			233			233	
2:00 PM		295	307			301			301	
2:15 PM		313	309			311			311	
2:30 PM		298	314			306			306	
2:45 PM		270	274			272			272	
3:00 PM		286	261			274			274	
3:15 PM		283	316			300			300	
3:30 PM		295	273			284			284	
3:45 PM		261	268			265			265	
4:00 PM		266	274			270			270	
4:15 PM		260	265			263			263	
4:30 PM		251	264			258			258	
4:45 PM		281	277			279			279	
5:00 PM		295	290			293			293	
5:15 PM		317	329			323			323	
5:30 PM		315	303			309			309	
5:45 PM		313	311			312			312	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing SPECIFIC LOCATION: 108 - Thornton Rd btwn Eight Mile and Pershing CITY/STATE: San Joaquin, CA							QC JOB #: 14799609 DIRECTION: NB/SB DATE: Sep 25 2018 - Sep 26 2018			
Start Time	Mon 25-Sep-18	Tue 26-Sep-18	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM		299	316			308			308	
6:15 PM		318	289			304			304	
6:30 PM		257	268			263			263	
6:45 PM		251	260			256			256	
7:00 PM		237	233			235			235	
7:15 PM		258	210			234			234	
7:30 PM		231	235			233			233	
7:45 PM		231	234			233			233	
8:00 PM		219	246			233			233	
8:15 PM		196	193			195			195	
8:30 PM		131	188			160			160	
8:45 PM		137	151			144			144	
9:00 PM		147	110			129			129	
9:15 PM		110	124			117			117	
9:30 PM		97	106			102			102	
9:45 PM		80	107			94			94	
10:00 PM		89	76			83			83	
10:15 PM		69	57			63			63	
10:30 PM		71	51			61			61	
10:45 PM		52	49			51			51	
11:00 PM		61	58			60			60	
11:15 PM		41	41			41			41	
11:30 PM		31	38			35			35	
11:45 PM		40	30			35			35	
Day Total		15836	16085			15982			15982	
% Weekday Average		99.1%	100.6%							
% Week Average		99.1%	100.6%			100.0%				
AM Peak		7:00 AM	7:00 AM			7:00 AM			7:00 AM	
Volume		340	324			332			332	
PM Peak		6:15 PM	5:15 PM			5:15 PM			5:15 PM	
Volume		318	329			323			323	
<i>Comments:</i>										

LOCATION: 116 - West btwn Harney and Armstrong SPECIFIC LOCATION: 116 - West btwn Harney and Armstrong CITY/STATE: San Joaquin, CA						QC JOB #: 14799617 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			14	26		20			20	
12:15 AM			17	11		14			14	
12:30 AM			16	16		16			16	
12:45 AM			12	14		13			13	
1:00 AM			13	13		13			13	
1:15 AM			11	16		14			14	
1:30 AM			11	13		12			12	
1:45 AM			8	9		9			9	
2:00 AM			19	15		17			17	
2:15 AM			12	9		11			11	
2:30 AM			11	8		10			10	
2:45 AM			13	16		15			15	
3:00 AM			7	11		9			9	
3:15 AM			10	11		11			11	
3:30 AM			18	16		17			17	
3:45 AM			24	23		24			24	
4:00 AM			23	26		25			25	
4:15 AM			26	19		23			23	
4:30 AM			46	39		43			43	
4:45 AM			44	42		43			43	
5:00 AM			34	38		36			36	
5:15 AM			61	67		64			64	
5:30 AM			74	57		66			66	
5:45 AM			101	110		106			106	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 116 - West btwn Harney and Armstrong SPECIFIC LOCATION: 116 - West btwn Harney and Armstrong CITY/STATE: San Joaquin, CA						QC JOB #: 14799617 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			111	84		98			98	
6:15 AM			107	110		109			109	
6:30 AM			153	135		144			144	
6:45 AM			242	244		243			243	
7:00 AM			252	252		252			252	
7:15 AM			278	254		266			266	
7:30 AM			268	315		292			292	
7:45 AM			309	298		304			304	
8:00 AM			285	229		257			257	
8:15 AM			215	208		212			212	
8:30 AM			208	200		204			204	
8:45 AM			187	218		203			203	
9:00 AM			179	175		177			177	
9:15 AM			203	164		184			184	
9:30 AM			178	195		187			187	
9:45 AM			182	176		179			179	
10:00 AM			151	157		154			154	
10:15 AM			144	151		148			148	
10:30 AM			187	192		190			190	
10:45 AM			182	178		180			180	
11:00 AM			174	182		178			178	
11:15 AM			198	195		197			197	
11:30 AM			192	198		195			195	
11:45 AM			228	198		213			213	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 116 - West btwn Harney and Armstrong SPECIFIC LOCATION: 116 - West btwn Harney and Armstrong CITY/STATE: San Joaquin, CA						QC JOB #: 14799617 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			216	208		212			212	
12:15 PM			189	211		200			200	
12:30 PM			210	203		207			207	
12:45 PM			241	220		231			231	
1:00 PM			224	201		213			213	
1:15 PM			231	170		201			201	
1:30 PM			221	208		215			215	
1:45 PM			251	185		218			218	
2:00 PM			247	218		233			233	
2:15 PM			280	268		274			274	
2:30 PM			266	268		267			267	
2:45 PM			268	234		251			251	
3:00 PM			246	274		260			260	
3:15 PM			253	263		258			258	
3:30 PM			285	243		264			264	
3:45 PM			259	271		265			265	
4:00 PM			266	252		259			259	
4:15 PM			239	279		259			259	
4:30 PM			290	263		277			277	
4:45 PM			277	231		254			254	
5:00 PM			313	270		292			292	
5:15 PM			308	310		309			309	
5:30 PM			268	279		274			274	
5:45 PM			295	278		287			287	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 116 - West btwn Harney and Armstrong SPECIFIC LOCATION: 116 - West btwn Harney and Armstrong CITY/STATE: San Joaquin, CA						QC JOB #: 14799617 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			254	227		241			241	
6:15 PM			214	226		220			220	
6:30 PM			179	205		192			192	
6:45 PM			174	175		175			175	
7:00 PM			180	162		171			171	
7:15 PM			165	204		185			185	
7:30 PM			173	168		171			171	
7:45 PM			139	181		160			160	
8:00 PM			128	143		136			136	
8:15 PM			146	134		140			140	
8:30 PM			116	104		110			110	
8:45 PM			109	105		107			107	
9:00 PM			83	85		84			84	
9:15 PM			74	97		86			86	
9:30 PM			65	99		82			82	
9:45 PM			54	61		58			58	
10:00 PM			56	43		50			50	
10:15 PM			56	70		63			63	
10:30 PM			53	61		57			57	
10:45 PM			33	42		38			38	
11:00 PM			37	46		42			42	
11:15 PM			29	31		30			30	
11:30 PM			34	38		36			36	
11:45 PM			22	31		27			27	
Day Total			14154	13878		14038			14038	
% Weekday Average			100.8%	98.9%						
% Week Average			100.8%	98.9%		100.0%				
AM Peak			7:45 AM	7:30 AM		7:45 AM			7:45 AM	
Volume			309	315		304			304	
PM Peak			5:00 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			313	310		309			309	
<i>Comments:</i>										

LOCATION: 117 - West Ln btwn Armstrong and Eight Mile SPECIFIC LOCATION: 117 - West Ln btwn Armstrong and Eight Mile CITY/STATE: Lodi, CA						QC JOB #: 14799618 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			21	14		18			18	
12:15 AM			24	14		19			19	
12:30 AM			16	16		16			16	
12:45 AM			13	12		13			13	
1:00 AM			6	14		10			10	
1:15 AM			9	10		10			10	
1:30 AM			10	10		10			10	
1:45 AM			12	8		10			10	
2:00 AM			6	5		6			6	
2:15 AM			11	8		10			10	
2:30 AM			7	12		10			10	
2:45 AM			13	18		16			16	
3:00 AM			14	10		12			12	
3:15 AM			11	14		13			13	
3:30 AM			10	12		11			11	
3:45 AM			19	17		18			18	
4:00 AM			16	21		19			19	
4:15 AM			15	27		21			21	
4:30 AM			30	27		29			29	
4:45 AM			27	38		33			33	
5:00 AM			35	39		37			37	
5:15 AM			41	44		43			43	
5:30 AM			59	67		63			63	
5:45 AM			63	73		68			68	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 117 - West Ln btwn Armstrong and Eight Mile SPECIFIC LOCATION: 117 - West Ln btwn Armstrong and Eight Mile CITY/STATE: Lodi, CA							QC JOB #: 14799618 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			69	61		65			65	
6:15 AM			90	108		99			99	
6:30 AM			135	137		136			136	
6:45 AM			162	178		170			170	
7:00 AM			161	139		150			150	
7:15 AM			216	190		203			203	
7:30 AM			231	249		240			240	
7:45 AM			236	264		250			250	
8:00 AM			207	184		196			196	
8:15 AM			185	191		188			188	
8:30 AM			203	170		187			187	
8:45 AM			190	222		206			206	
9:00 AM			149	178		164			164	
9:15 AM			174	160		167			167	
9:30 AM			184	195		190			190	
9:45 AM			172	166		169			169	
10:00 AM			146	143		145			145	
10:15 AM			133	152		143			143	
10:30 AM			164	175		170			170	
10:45 AM			190	173		182			182	
11:00 AM			163	168		166			166	
11:15 AM			164	175		170			170	
11:30 AM			170	169		170			170	
11:45 AM			185	164		175			175	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 117 - West Ln btwn Armstrong and Eight Mile SPECIFIC LOCATION: 117 - West Ln btwn Armstrong and Eight Mile CITY/STATE: Lodi, CA							QC JOB #: 14799618 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018			
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			178	143		161			161	
12:15 PM			181	169		175			175	
12:30 PM			178	184		181			181	
12:45 PM			196	172		184			184	
1:00 PM			206	168		187			187	
1:15 PM			209	170		190			190	
1:30 PM			179	192		186			186	
1:45 PM			207	215		211			211	
2:00 PM			195	209		202			202	
2:15 PM			225	194		210			210	
2:30 PM			219	241		230			230	
2:45 PM			239	246		243			243	
3:00 PM			198	256		227			227	
3:15 PM			211	241		226			226	
3:30 PM			239	210		225			225	
3:45 PM			232	250		241			241	
4:00 PM			182	208		195			195	
4:15 PM			237	226		232			232	
4:30 PM			245	246		246			246	
4:45 PM			252	221		237			237	
5:00 PM			233	254		244			244	
5:15 PM			225	300		263			263	
5:30 PM			242	232		237			237	
5:45 PM			241	231		236			236	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 117 - West Ln btwn Armstrong and Eight Mile SPECIFIC LOCATION: 117 - West Ln btwn Armstrong and Eight Mile CITY/STATE: Lodi, CA						QC JOB #: 14799618 DIRECTION: NB/SB DATE: Sep 19 2018 - Sep 20 2018				
Start Time	Mon	Tue	Wed 19-Sep-18	Thu 20-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			201	197		199			199	
6:15 PM			181	206		194			194	
6:30 PM			177	149		163			163	
6:45 PM			181	159		170			170	
7:00 PM			146	165		156			156	
7:15 PM			138	142		140			140	
7:30 PM			155	152		154			154	
7:45 PM			122	134		128			128	
8:00 PM			124	153		139			139	
8:15 PM			121	137		129			129	
8:30 PM			90	91		91			91	
8:45 PM			107	98		103			103	
9:00 PM			104	84		94			94	
9:15 PM			104	81		93			93	
9:30 PM			65	80		73			73	
9:45 PM			44	63		54			54	
10:00 PM			52	45		49			49	
10:15 PM			57	47		52			52	
10:30 PM			39	42		41			41	
10:45 PM			47	51		49			49	
11:00 PM			41	40		41			41	
11:15 PM			35	28		32			32	
11:30 PM			23	30		27			27	
11:45 PM			24	28		26			26	
Day Total			12094	12221		12182			12182	
% Weekday Average			99.3%	100.3%						
% Week Average			99.3%	100.3%		100.0%				
AM Peak			7:45 AM	7:45 AM		7:45 AM			7:45 AM	
Volume			236	264		250			250	
PM Peak			4:45 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			252	300		263			263	
<i>Comments:</i>										

LOCATION: 118 - West Ln btwn Eight Mile and Morada SPECIFIC LOCATION: 118 - West Ln btwn Eight Mile and Morada CITY/STATE: San Joaquin, CA						QC JOB #: 14799619 DIRECTION: NB/SB DATE: Oct 10 2018 - Oct 11 2018				
Start Time	Mon	Tue	Wed 10-Oct-18	Thu 11-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			47	38		43			43	
12:15 AM			31	37		34			34	
12:30 AM			19	25		22			22	
12:45 AM			23	19		21			21	
1:00 AM			18	17		18			18	
1:15 AM			21	18		20			20	
1:30 AM			15	25		20			20	
1:45 AM			26	16		21			21	
2:00 AM			25	23		24			24	
2:15 AM			16	19		18			18	
2:30 AM			12	14		13			13	
2:45 AM			15	16		16			16	
3:00 AM			18	19		19			19	
3:15 AM			22	21		22			22	
3:30 AM			36	36		36			36	
3:45 AM			27	21		24			24	
4:00 AM			28	26		27			27	
4:15 AM			30	32		31			31	
4:30 AM			36	44		40			40	
4:45 AM			46	52		49			49	
5:00 AM			51	49		50			50	
5:15 AM			56	51		54			54	
5:30 AM			71	92		82			82	
5:45 AM			115	113		114			114	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 118 - West Ln btwn Eight Mile and Morada SPECIFIC LOCATION: 118 - West Ln btwn Eight Mile and Morada CITY/STATE: San Joaquin, CA										QC JOB #: 14799619 DIRECTION: NB/SB DATE: Oct 10 2018 - Oct 11 2018
Start Time	Mon	Tue	Wed 10-Oct-18	Thu 11-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			102	109		106			106	
6:15 AM			112	116		114			114	
6:30 AM			134	135		135			135	
6:45 AM			151	161		156			156	
7:00 AM			148	143		146			146	
7:15 AM			169	174		172			172	
7:30 AM			247	258		253			253	
7:45 AM			257	263		260			260	
8:00 AM			248	222		235			235	
8:15 AM			226	240		233			233	
8:30 AM			212	238		225			225	
8:45 AM			239	234		237			237	
9:00 AM			192	219		206			206	
9:15 AM			193	208		201			201	
9:30 AM			229	221		225			225	
9:45 AM			204	205		205			205	
10:00 AM			239	228		234			234	
10:15 AM			220	218		219			219	
10:30 AM			209	223		216			216	
10:45 AM			245	219		232			232	
11:00 AM			208	203		206			206	
11:15 AM			215	213		214			214	
11:30 AM			207	218		213			213	
11:45 AM			232	238		235			235	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 118 - West Ln btwn Eight Mile and Morada SPECIFIC LOCATION: 118 - West Ln btwn Eight Mile and Morada CITY/STATE: San Joaquin, CA							QC JOB #: 14799619 DIRECTION: NB/SB DATE: Oct 10 2018 - Oct 11 2018			
Start Time	Mon	Tue	Wed 10-Oct-18	Thu 11-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			217	231		224			224	
12:15 PM			249	234		242			242	
12:30 PM			247	213		230			230	
12:45 PM			250	235		243			243	
1:00 PM			267	259		263			263	
1:15 PM			249	237		243			243	
1:30 PM			228	265		247			247	
1:45 PM			245	254		250			250	
2:00 PM			241	246		244			244	
2:15 PM			259	280		270			270	
2:30 PM			268	269		269			269	
2:45 PM			269	284		277			277	
3:00 PM			316	298		307			307	
3:15 PM			292	300		296			296	
3:30 PM			284	300		292			292	
3:45 PM			286	305		296			296	
4:00 PM			277	291		284			284	
4:15 PM			294	301		298			298	
4:30 PM			302	315		309			309	
4:45 PM			314	361		338			338	
5:00 PM			358	340		349			349	
5:15 PM			364	389		377			377	
5:30 PM			349	318		334			334	
5:45 PM			345	322		334			334	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 118 - West Ln btwn Eight Mile and Morada SPECIFIC LOCATION: 118 - West Ln btwn Eight Mile and Morada CITY/STATE: San Joaquin, CA						QC JOB #: 14799619 DIRECTION: NB/SB DATE: Oct 10 2018 - Oct 11 2018				
Start Time	Mon	Tue	Wed 10-Oct-18	Thu 11-Oct-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			294	288		291			291	
6:15 PM			277	279		278			278	
6:30 PM			216	270		243			243	
6:45 PM			266	236		251			251	
7:00 PM			263	241		252			252	
7:15 PM			245	240		243			243	
7:30 PM			207	222		215			215	
7:45 PM			171	190		181			181	
8:00 PM			178	178		178			178	
8:15 PM			165	190		178			178	
8:30 PM			168	164		166			166	
8:45 PM			153	174		164			164	
9:00 PM			119	118		119			119	
9:15 PM			132	126		129			129	
9:30 PM			112	106		109			109	
9:45 PM			101	96		99			99	
10:00 PM			93	106		100			100	
10:15 PM			76	78		77			77	
10:30 PM			77	84		81			81	
10:45 PM			77	88		83			83	
11:00 PM			58	50		54			54	
11:15 PM			69	66		68			68	
11:30 PM			42	59		51			51	
11:45 PM			42	58		50			50	
Day Total			16013	16283		16172			16172	
% Weekday Average			99.0%	100.7%						
% Week Average			99.0%	100.7%		100.0%				
AM Peak			7:45 AM	7:45 AM		7:45 AM			7:45 AM	
Volume			257	263		260			260	
PM Peak			5:15 PM	5:15 PM		5:15 PM			5:15 PM	
Volume			364	389		377			377	
<i>Comments:</i>										

LOCATION: 119 - West Ln btwn Morada and Hammer SPECIFIC LOCATION: 119 - West Ln btwn Morada and Hammer CITY/STATE: San Joaquin, CA						QC JOB #: 14799620 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			45	46		46			46	
12:15 AM			44	37		41			41	
12:30 AM			31	35		33			33	
12:45 AM			24	32		28			28	
1:00 AM			24	19		22			22	
1:15 AM			27	16		22			22	
1:30 AM			19	23		21			21	
1:45 AM			15	20		18			18	
2:00 AM			32	17		25			25	
2:15 AM			20	16		18			18	
2:30 AM			24	17		21			21	
2:45 AM			16	20		18			18	
3:00 AM			26	21		24			24	
3:15 AM			20	25		23			23	
3:30 AM			29	25		27			27	
3:45 AM			32	39		36			36	
4:00 AM			36	36		36			36	
4:15 AM			41	35		38			38	
4:30 AM			61	61		61			61	
4:45 AM			64	61		63			63	
5:00 AM			49	49		49			49	
5:15 AM			75	58		67			67	
5:30 AM			105	100		103			103	
5:45 AM			110	98		104			104	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 119 - West Ln btwn Morada and Hammer SPECIFIC LOCATION: 119 - West Ln btwn Morada and Hammer CITY/STATE: San Joaquin, CA							QC JOB #: 14799620 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018			
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			110	103		107			107	
6:15 AM			133	122		128			128	
6:30 AM			242	247		245			245	
6:45 AM			370	394		382			382	
7:00 AM			452	450		451			451	
7:15 AM			453	448		451			451	
7:30 AM			423	411		417			417	
7:45 AM			432	428		430			430	
8:00 AM			416	406		411			411	
8:15 AM			385	349		367			367	
8:30 AM			403	363		383			383	
8:45 AM			342	315		329			329	
9:00 AM			317	265		291			291	
9:15 AM			279	286		283			283	
9:30 AM			272	289		281			281	
9:45 AM			264	280		272			272	
10:00 AM			257	263		260			260	
10:15 AM			255	249		252			252	
10:30 AM			260	277		269			269	
10:45 AM			295	319		307			307	
11:00 AM			296	315		306			306	
11:15 AM			301	295		298			298	
11:30 AM			300	343		322			322	
11:45 AM			336	429		383			383	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

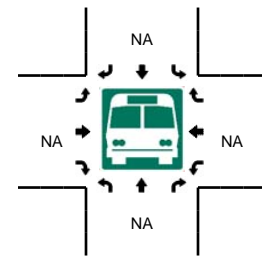
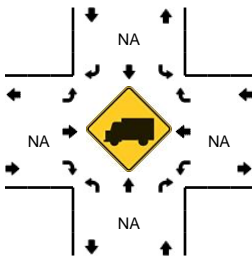
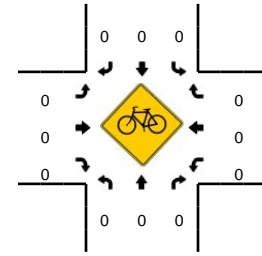
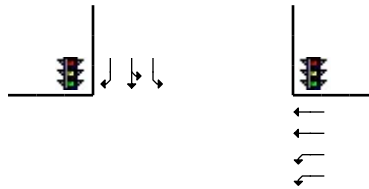
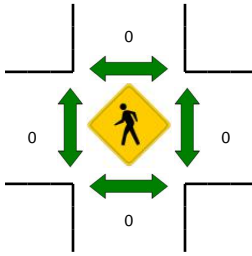
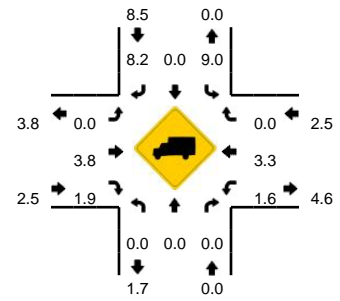
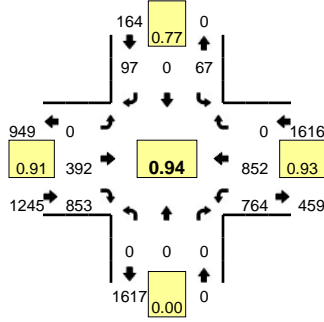
LOCATION: 119 - West Ln btwn Morada and Hammer SPECIFIC LOCATION: 119 - West Ln btwn Morada and Hammer CITY/STATE: San Joaquin, CA						QC JOB #: 14799620 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			337	418		378			378	
12:15 PM			364	376		370			370	
12:30 PM			373	327		350			350	
12:45 PM			426	385		406			406	
1:00 PM			351	295		323			323	
1:15 PM			383	284		334			334	
1:30 PM			434	325		380			380	
1:45 PM			373	316		345			345	
2:00 PM			369	303		336			336	
2:15 PM			371	335		353			353	
2:30 PM			367	356		362			362	
2:45 PM			373	382		378			378	
3:00 PM			363	384		374			374	
3:15 PM			376	432		404			404	
3:30 PM			366	408		387			387	
3:45 PM			390	379		385			385	
4:00 PM			376	392		384			384	
4:15 PM			378	382		380			380	
4:30 PM			406	387		397			397	
4:45 PM			400	378		389			389	
5:00 PM			372	411		392			392	
5:15 PM			434	399		417			417	
5:30 PM			445	401		423			423	
5:45 PM			393	354		374			374	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										
<i>Comments:</i>										

LOCATION: 119 - West Ln btwn Morada and Hammer SPECIFIC LOCATION: 119 - West Ln btwn Morada and Hammer CITY/STATE: San Joaquin, CA						QC JOB #: 14799620 DIRECTION: NB/SB DATE: Sep 26 2018 - Sep 27 2018				
Start Time	Mon	Tue	Wed 26-Sep-18	Thu 27-Sep-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			400	374		387			387	
6:15 PM			337	319		328			328	
6:30 PM			357	289		323			323	
6:45 PM			284	316		300			300	
7:00 PM			362	293		328			328	
7:15 PM			346	316		331			331	
7:30 PM			269	274		272			272	
7:45 PM			207	283		245			245	
8:00 PM			207	253		230			230	
8:15 PM			244	243		244			244	
8:30 PM			207	179		193			193	
8:45 PM			193	175		184			184	
9:00 PM			187	142		165			165	
9:15 PM			140	155		148			148	
9:30 PM			127	133		130			130	
9:45 PM			107	121		114			114	
10:00 PM			94	121		108			108	
10:15 PM			101	104		103			103	
10:30 PM			92	71		82			82	
10:45 PM			74	71		73			73	
11:00 PM			60	94		77			77	
11:15 PM			75	72		74			74	
11:30 PM			47	49		48			48	
11:45 PM			38	55		47			47	
Day Total			22337	21863		22124			22124	
% Weekday Average			101.0%	98.8%						
% Week Average			101.0%	98.8%		100.0%				
AM Peak			7:15 AM	7:00 AM		7:00 AM			7:00 AM	
Volume			453	450		451			451	
PM Peak			5:30 PM	3:15 PM		5:30 PM			5:30 PM	
Volume			445	432		423			423	
<i>Comments:</i>										

LOCATION: 65 - I-5 SB Ramps -- W 8 Mile Rd
CITY/STATE: Stockton, CA

QC JOB #: 147676111
DATE: Wed, Sep 19 2018

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

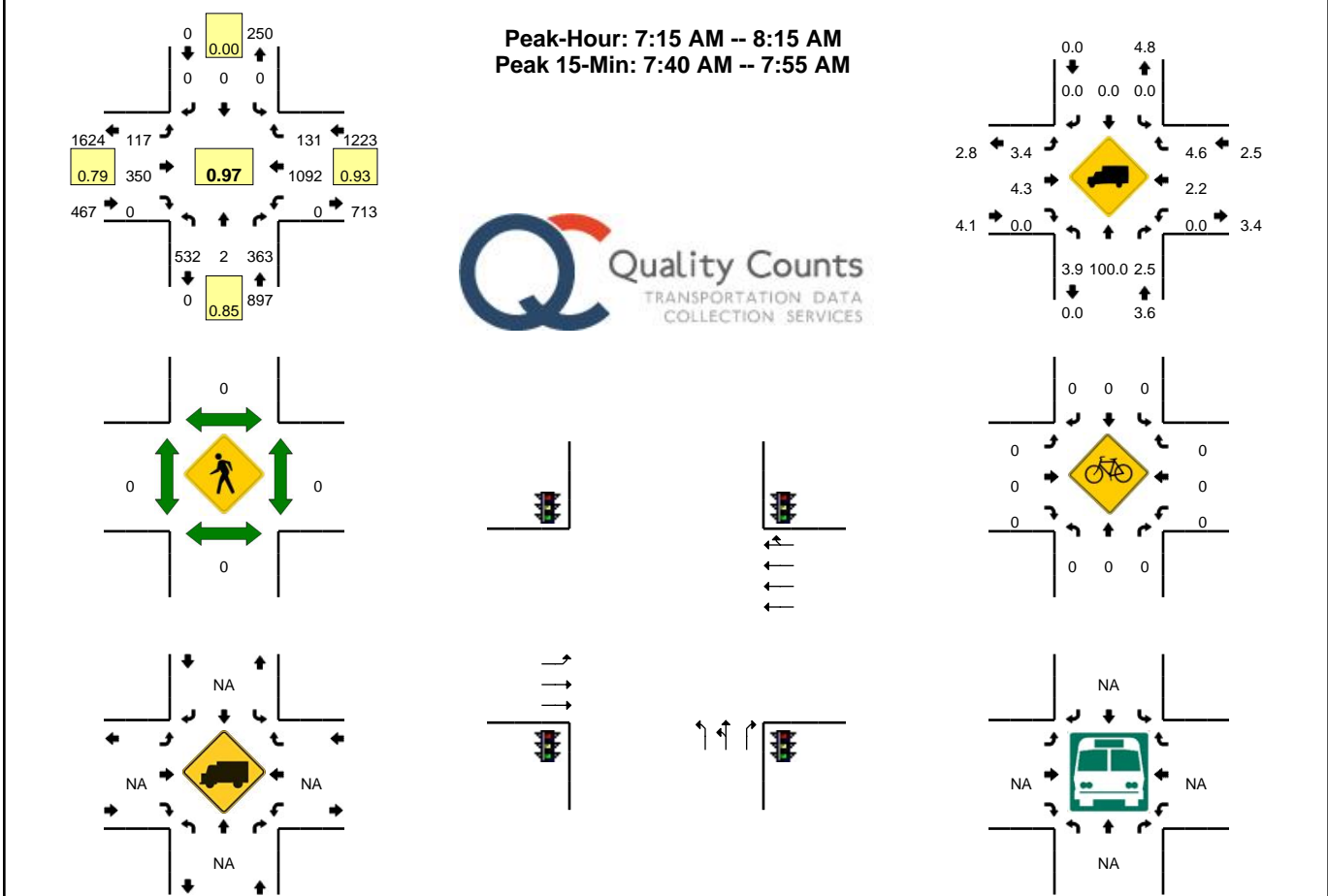


5-Min Count Period Beginning At	65 - I-5 SB Ramps (Northbound)				65 - I-5 SB Ramps (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	3	0	8	0	0	39	51	0	50	45	0	0	196	
7:05 AM	0	0	0	0	4	0	6	0	0	28	44	0	58	58	0	0	198	
7:10 AM	0	0	0	0	6	0	8	0	0	58	75	0	42	47	0	0	236	
7:15 AM	0	0	0	0	9	0	11	0	0	39	65	0	80	46	0	0	250	
7:20 AM	0	0	0	0	8	0	9	0	0	25	62	0	73	51	0	0	228	
7:25 AM	0	0	0	0	9	0	9	0	0	33	89	0	72	55	0	0	267	
7:30 AM	0	0	0	0	7	0	10	0	0	28	83	0	77	62	0	0	267	
7:35 AM	0	0	0	0	3	0	8	0	0	30	80	0	84	61	0	0	266	
7:40 AM	0	0	0	0	6	0	7	0	0	42	84	0	66	67	0	0	272	
7:45 AM	0	0	0	0	5	0	9	0	0	40	75	0	61	67	0	0	257	
7:50 AM	0	0	0	0	3	0	4	0	0	20	64	0	76	80	0	0	247	
7:55 AM	0	0	0	0	3	0	9	0	0	28	57	0	48	102	0	0	247	2931
8:00 AM	0	0	0	0	3	0	14	0	0	27	48	0	37	90	0	0	219	2954
8:05 AM	0	0	0	0	7	0	3	0	0	47	75	0	47	89	0	0	268	3024
8:10 AM	0	0	0	0	4	0	4	0	0	33	71	0	43	82	0	0	237	3025
8:15 AM	0	0	0	0	8	0	7	0	0	30	67	0	42	91	0	0	245	3020
8:20 AM	0	0	0	0	7	0	7	0	0	33	70	0	44	59	0	0	220	3012
8:25 AM	0	0	0	0	3	0	7	0	0	32	82	0	47	72	0	0	243	2988
8:30 AM	0	0	0	0	3	0	11	0	0	20	38	0	27	78	0	0	177	2898
8:35 AM	0	0	0	0	5	0	14	0	0	29	50	0	32	70	0	0	200	2832
8:40 AM	0	0	0	0	4	0	9	0	0	32	60	0	58	69	0	0	232	2792
8:45 AM	0	0	0	0	5	0	9	0	0	26	57	0	40	74	0	0	211	2746
8:50 AM	0	0	0	0	3	0	5	0	0	32	59	0	33	73	0	0	205	2704
8:55 AM	0	0	0	0	8	0	8	0	0	35	54	0	32	70	0	0	207	2664
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	64	0	100	0	0	400	988	0	908	760	0	0	3220	
Heavy Trucks	0	0	0	0	8	0	0	0	0	12	16	0	12	20	0	0	68	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: 66 - I-5 NB Ramps -- W 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676113
DATE: Wed, Sep 19 2018



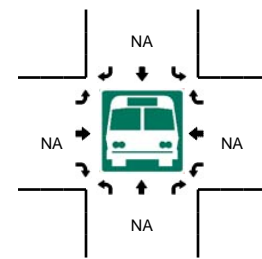
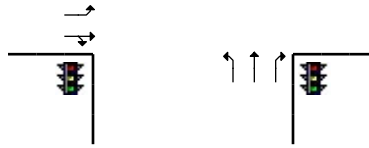
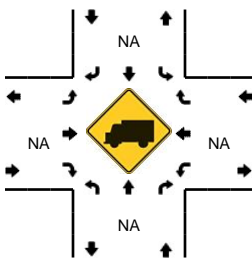
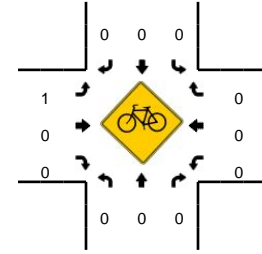
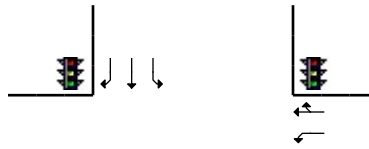
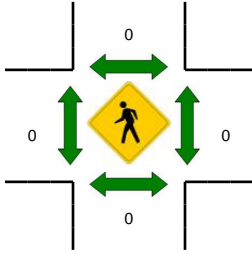
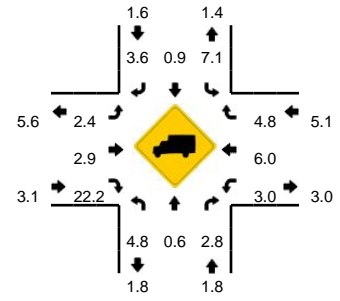
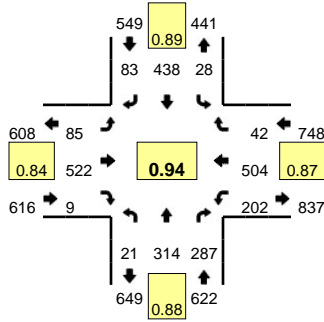
5-Min Count Period Beginning At	66 - I-5 NB Ramps (Northbound)				66 - I-5 NB Ramps (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	29	0	47	0	0	0	0	0	10	32	0	0	0	63	19	0	200	
7:05 AM	29	1	47	0	0	0	0	0	8	28	0	0	0	95	13	0	221	
7:10 AM	19	0	43	0	0	0	0	0	13	42	0	0	0	83	12	0	212	
7:15 AM	29	0	33	0	0	0	0	0	19	37	0	0	0	93	19	0	230	
7:20 AM	25	0	25	0	0	0	0	0	4	39	0	0	0	85	13	0	191	
7:25 AM	34	0	29	0	0	0	0	0	11	15	0	0	0	110	9	0	208	
7:30 AM	40	0	26	0	0	0	0	0	4	32	0	0	0	94	9	0	205	
7:35 AM	39	0	30	0	0	0	0	0	9	34	0	0	0	100	14	0	226	
7:40 AM	42	1	35	0	0	0	0	0	12	29	0	0	0	102	7	0	228	
7:45 AM	44	0	26	0	0	0	0	0	11	32	0	0	0	84	7	0	204	
7:50 AM	51	1	33	0	0	0	0	0	9	24	0	0	0	102	16	0	236	
7:55 AM	51	0	24	0	0	0	0	0	6	15	0	0	0	97	9	0	202	2563
8:00 AM	71	0	33	0	0	0	0	0	4	25	0	0	0	63	10	0	206	2569
8:05 AM	53	0	28	0	0	0	0	0	13	48	0	0	0	73	8	0	223	2571
8:10 AM	53	0	41	0	0	0	0	0	15	20	0	0	0	89	10	0	228	2587
8:15 AM	51	0	35	0	0	0	0	0	9	28	0	0	0	66	8	0	197	2554
8:20 AM	36	0	28	0	0	0	0	0	9	32	0	0	0	69	11	0	185	2548
8:25 AM	54	0	20	0	0	0	0	0	9	30	0	0	0	69	10	0	192	2532
8:30 AM	49	0	15	0	0	0	0	0	4	16	0	0	0	57	8	0	149	2476
8:35 AM	46	0	29	0	0	0	0	0	7	27	0	0	0	68	7	0	184	2434
8:40 AM	45	0	16	0	0	0	0	0	10	20	0	0	0	66	8	0	165	2371
8:45 AM	50	0	11	0	0	0	0	0	11	34	0	0	0	68	12	0	186	2353
8:50 AM	48	0	19	0	0	0	0	0	6	16	0	0	0	58	13	0	160	2277
8:55 AM	47	0	22	0	0	0	0	0	19	25	0	0	0	45	8	0	166	2241
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	548	8	376	0	0	0	0	0	128	340	0	0	0	1152	120	0	2672	
Heavy Trucks	16	8	4		0	0	0		4	8	0		0	16	8		64	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: 82 - Lower Sacramento Rd -- E 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676133
DATE: Wed, Sep 26 2018

Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM



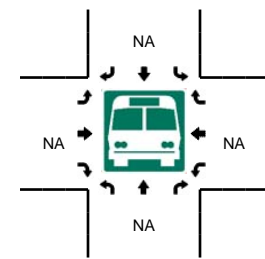
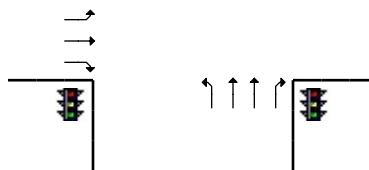
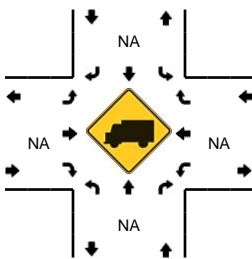
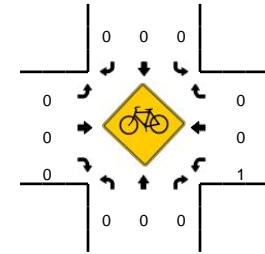
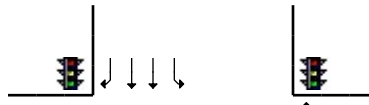
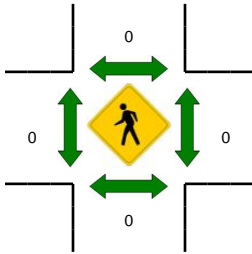
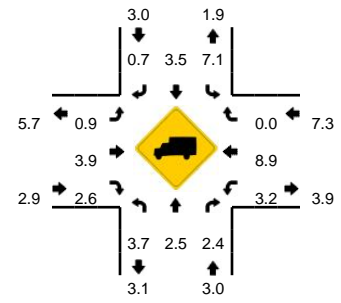
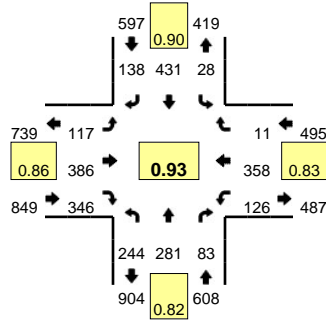
5-Min Count Period Beginning At	82 - Lower Sacramento Rd (Northbound)				82 - Lower Sacramento Rd (Southbound)				E 8 Mile Rd (Eastbound)				E 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	22	16	0	6	31	7	0	8	36	1	0	12	35	3	0	178	
7:05 AM	1	18	19	0	7	28	6	0	10	47	0	0	10	38	1	0	185	
7:10 AM	1	14	30	0	2	28	4	0	7	50	0	0	14	24	2	0	176	
7:15 AM	2	15	24	0	4	23	8	0	4	63	1	0	11	41	3	0	199	
7:20 AM	1	18	29	0	0	45	8	0	8	53	0	0	20	39	3	0	224	
7:25 AM	3	24	26	0	1	31	10	0	3	65	0	0	14	38	4	0	219	
7:30 AM	2	32	26	0	2	41	4	0	4	37	0	0	13	48	0	0	209	
7:35 AM	3	26	26	0	1	27	6	0	9	36	1	0	11	52	3	0	201	
7:40 AM	2	30	18	0	2	45	5	0	11	47	0	0	17	43	0	0	220	
7:45 AM	1	37	33	0	3	44	11	0	16	48	2	0	10	41	3	0	249	
7:50 AM	0	29	15	0	2	32	4	0	6	35	0	0	20	57	4	0	204	
7:55 AM	2	20	28	0	3	32	4	0	10	38	3	0	14	44	6	0	204	2468
8:00 AM	3	23	23	0	5	44	10	0	2	20	1	0	29	36	5	0	201	2491
8:05 AM	2	28	19	0	4	42	9	0	6	53	2	0	15	30	4	0	214	2520
8:10 AM	2	28	22	0	2	30	9	0	3	30	0	0	21	36	3	0	186	2530
8:15 AM	0	19	22	0	3	25	3	0	7	60	0	0	18	40	7	0	204	2535
8:20 AM	1	13	18	0	6	28	7	0	13	39	3	0	19	40	6	0	193	2504
8:25 AM	1	22	21	0	5	34	6	0	7	48	3	0	14	33	8	0	202	2487
8:30 AM	1	22	16	0	1	17	10	0	7	45	4	0	19	41	3	0	186	2464
8:35 AM	4	21	16	0	3	20	10	0	10	39	3	0	18	36	8	0	188	2451
8:40 AM	3	26	19	0	4	24	7	0	10	35	2	0	13	27	2	0	172	2403
8:45 AM	1	22	12	0	7	36	8	0	5	46	0	0	16	35	10	0	198	2352
8:50 AM	0	12	11	0	3	18	6	0	10	44	0	0	20	42	6	0	172	2320
8:55 AM	0	15	15	0	3	39	7	0	6	39	2	0	6	30	3	0	165	2281
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	12	384	264	0	28	484	80	0	132	520	8	0	188	564	28	0	2692	
Heavy Trucks	0	0	0		4	8	8		0	24	4		8	12	4		72	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: 26 - West Ln -- E 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 14767637
DATE: Tue, Sep 25 2018

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

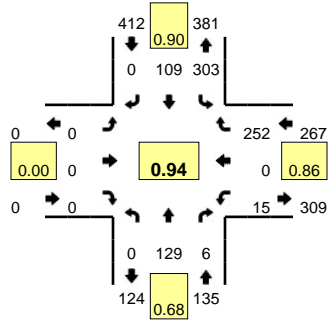


5-Min Count Period Beginning At	26 - West Ln (Northbound)				26 - West Ln (Southbound)				E 8 Mile Rd (Eastbound)				E 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	14	16	6	0	0	42	9	0	5	29	30	0	16	23	4	0	194	
7:05 AM	18	11	5	0	0	25	3	0	5	27	28	0	12	32	0	0	166	
7:10 AM	13	27	6	1	0	18	7	0	8	45	37	0	7	17	1	0	187	
7:15 AM	19	12	4	1	0	32	8	0	11	31	36	0	6	29	0	0	189	
7:20 AM	24	27	6	0	2	30	8	0	12	34	43	0	4	31	0	0	221	
7:25 AM	16	20	6	0	0	46	6	0	7	32	42	0	4	24	0	0	203	
7:30 AM	29	22	3	0	1	24	14	0	5	27	35	0	21	29	1	0	211	
7:35 AM	20	25	3	0	1	38	9	0	17	39	24	0	8	30	1	0	215	
7:40 AM	22	30	10	0	3	45	13	0	10	28	17	0	12	29	0	0	219	
7:45 AM	21	35	11	0	1	37	15	3	11	29	21	0	12	29	2	0	227	
7:50 AM	20	27	9	0	0	33	7	0	7	42	32	0	16	41	1	0	235	
7:55 AM	23	20	5	0	1	42	12	0	7	34	27	0	15	34	4	0	224	2491
8:00 AM	15	23	11	0	2	32	10	4	17	32	19	0	13	33	1	0	212	2509
8:05 AM	23	11	9	0	2	27	18	3	5	33	30	0	5	25	1	0	192	2535
8:10 AM	11	29	6	0	5	45	18	0	8	25	20	0	10	24	0	0	201	2549
8:15 AM	13	14	9	0	0	34	8	0	6	35	24	0	7	33	3	0	186	2546
8:20 AM	16	16	7	0	1	18	7	1	12	38	23	0	11	40	0	0	190	2515
8:25 AM	29	22	3	0	0	22	6	0	14	21	34	0	10	22	0	0	183	2495
8:30 AM	21	26	5	0	0	28	13	1	5	36	26	0	7	30	0	0	198	2482
8:35 AM	21	14	4	0	1	28	5	0	14	28	21	0	10	28	1	0	175	2442
8:40 AM	19	26	7	0	0	30	5	0	7	32	18	0	2	26	1	0	173	2396
8:45 AM	33	29	4	0	0	13	9	0	10	31	29	0	8	30	0	0	196	2365
8:50 AM	10	15	6	0	0	23	10	0	6	40	20	0	10	25	0	0	165	2295
8:55 AM	26	22	9	0	0	15	8	0	5	26	22	0	3	14	1	0	151	2222
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	256	328	100	0	8	448	136	12	100	420	320	0	172	416	28	0	2744	
Heavy Trucks	4	4	4		0	12	0		0	12	16		4	36	0		92	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		1	0	0		1	
Railroad																		
Stopped Buses																		

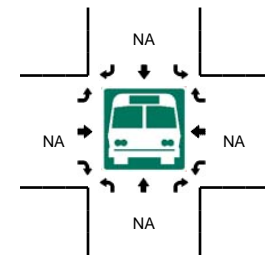
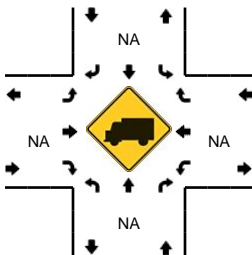
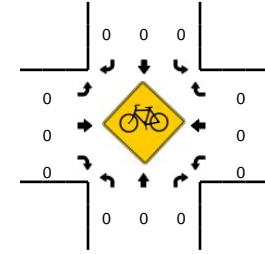
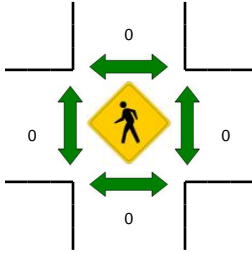
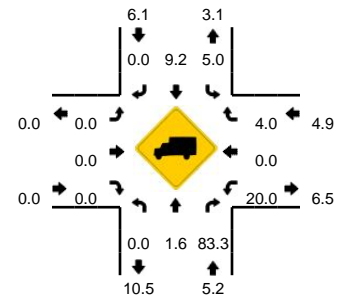
Comments:

LOCATION: 64 - 99 Frontage Rd -- Hwy 99 SB Ramps
CITY/STATE: San Joaquin, CA

QC JOB #: 147676109
DATE: Tue, Sep 25 2018



Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

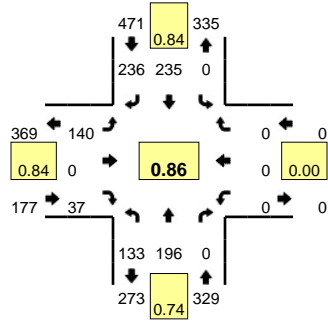


5-Min Count Period Beginning At	64 - 99 Frontage Rd (Northbound)				64 - 99 Frontage Rd (Southbound)				Hwy 99 SB Ramps (Eastbound)				Hwy 99 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	11	1	0	15	6	0	0	0	0	0	0	1	0	10	0	44	
7:05 AM	0	10	0	0	19	4	0	0	0	0	0	0	1	0	11	0	45	
7:10 AM	0	3	0	0	24	9	0	0	0	0	0	0	0	0	15	0	51	
7:15 AM	0	9	0	0	25	11	0	0	0	0	0	0	2	0	20	0	67	
7:20 AM	0	4	0	0	24	13	0	0	0	0	0	0	2	0	22	0	65	
7:25 AM	0	5	1	0	26	15	0	0	0	0	0	0	0	0	14	0	61	
7:30 AM	0	11	1	0	24	9	0	0	0	0	0	0	0	0	24	0	69	
7:35 AM	0	6	1	0	30	10	0	0	0	0	0	0	1	0	23	0	71	
7:40 AM	0	5	1	0	26	5	0	0	0	0	0	0	3	0	20	0	60	
7:45 AM	0	8	0	0	27	9	0	0	0	0	0	0	1	0	31	0	76	
7:50 AM	0	17	1	0	27	6	0	0	0	0	0	0	2	0	17	0	70	
7:55 AM	0	18	0	0	21	8	0	0	0	0	0	0	0	0	24	0	71	750
8:00 AM	0	20	1	0	26	4	0	0	0	0	0	0	1	0	21	0	73	779
8:05 AM	0	20	0	0	21	7	0	0	0	0	0	0	0	0	18	0	66	800
8:10 AM	0	6	0	0	26	12	0	0	0	0	0	0	3	0	18	0	65	814
8:15 AM	0	15	0	0	8	10	0	0	0	0	0	0	1	0	22	0	56	803
8:20 AM	0	16	0	0	23	8	0	0	0	0	0	0	0	0	21	0	68	806
8:25 AM	0	13	1	0	7	6	0	0	0	0	0	0	2	0	19	0	48	793
8:30 AM	0	8	2	0	19	5	0	0	0	0	0	0	1	0	12	0	47	771
8:35 AM	0	9	0	0	13	7	0	0	0	0	0	0	0	0	17	0	46	746
8:40 AM	0	6	0	0	25	6	0	0	0	0	0	0	0	0	13	0	50	736
8:45 AM	0	8	0	0	18	8	0	0	0	0	0	0	1	0	11	0	46	706
8:50 AM	0	3	0	0	11	6	0	0	0	0	0	0	2	0	11	0	33	669
8:55 AM	0	2	0	0	12	7	0	0	0	0	0	0	0	0	16	0	37	635
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	172	4	0	300	92	0	0	0	0	0	0	12	0	288	0	868	
Heavy Trucks	0	0	4	0	36	4	0	0	0	0	0	0	0	0	8	0	52	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

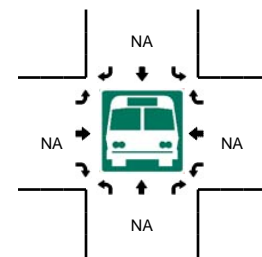
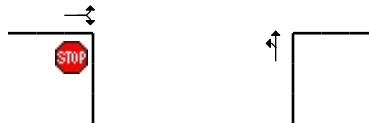
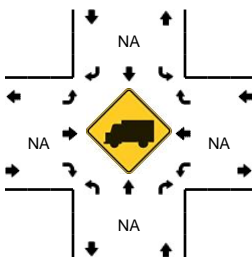
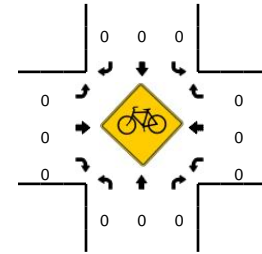
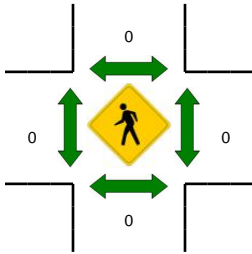
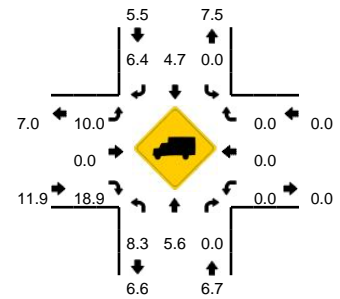
Comments:

LOCATION: 9 - 99 Frontage Rd -- Hwy 99 NB Ramps
CITY/STATE: San Joaquin, CA

QC JOB #: 14767615
DATE: Tue, Sep 25 2018



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:00 AM -- 8:15 AM



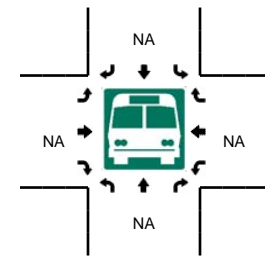
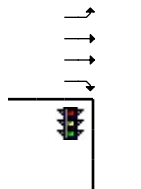
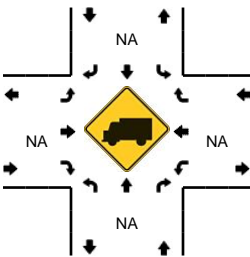
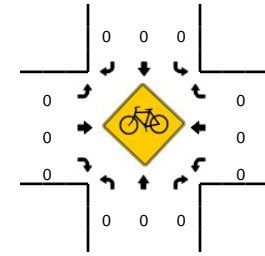
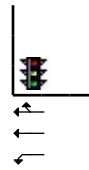
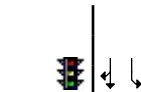
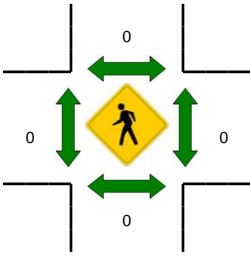
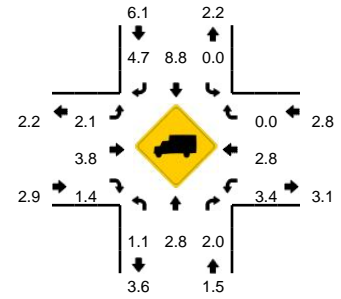
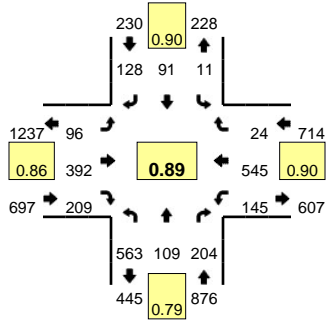
5-Min Count Period Beginning At	9 - 99 Frontage Rd (Northbound)				9 - 99 Frontage Rd (Southbound)				Hwy 99 NB Ramps (Eastbound)				Hwy 99 NB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	7	0	0	0	8	14	0	7	0	4	0	0	0	0	0	48	
7:05 AM	6	9	0	0	0	7	13	0	12	0	2	0	0	0	0	0	49	
7:10 AM	4	6	0	0	0	14	12	0	10	0	5	1	0	0	0	0	52	
7:15 AM	8	18	0	0	0	19	17	0	6	0	4	0	0	0	0	0	72	
7:20 AM	5	13	0	0	0	14	20	0	6	0	1	0	0	0	0	0	59	
7:25 AM	8	12	0	0	0	10	6	0	10	0	3	0	0	0	0	0	49	
7:30 AM	5	6	0	0	0	18	13	0	7	0	1	0	0	0	0	0	50	
7:35 AM	7	21	0	0	0	10	15	0	10	0	3	0	0	0	0	0	66	
7:40 AM	9	10	0	0	0	16	15	0	13	0	1	0	0	0	0	0	64	
7:45 AM	4	8	0	0	0	17	15	0	22	0	4	1	0	0	0	0	71	
7:50 AM	15	10	0	0	0	25	23	0	12	0	1	0	0	0	0	0	86	
7:55 AM	4	19	0	0	0	29	23	0	3	0	2	0	0	0	0	0	80	746
8:00 AM	21	11	0	0	0	23	20	0	11	0	4	0	0	0	0	0	90	788
8:05 AM	18	24	0	0	0	21	23	0	13	0	8	0	0	0	0	0	107	846
8:10 AM	18	17	0	0	0	24	17	0	9	0	1	0	0	0	0	0	86	880
8:15 AM	12	23	0	1	0	14	22	0	14	0	2	0	0	0	0	0	88	896
8:20 AM	10	21	0	0	0	16	23	0	16	0	1	0	0	0	0	0	87	924
8:25 AM	8	12	0	0	0	24	19	0	9	0	3	0	0	0	0	0	75	950
8:30 AM	3	18	0	0	0	18	20	0	10	0	4	0	0	0	0	0	73	973
8:35 AM	11	9	0	0	0	14	18	0	12	0	5	0	0	0	0	0	69	976
8:40 AM	8	24	0	0	0	10	13	0	8	0	2	0	0	0	0	0	65	977
8:45 AM	9	10	0	0	0	10	14	0	6	0	2	0	0	0	0	0	51	957
8:50 AM	5	6	0	0	0	8	11	0	10	0	0	0	0	0	0	0	40	911
8:55 AM	7	7	0	0	0	13	21	0	8	0	3	0	0	0	0	0	59	890
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	228	208	0	0	0	272	240	0	132	0	52	0	0	0	0	0	1132	
Heavy Trucks	4	12	0	0	0	8	12	0	20	0	8	0	0	0	0	0	64	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

LOCATION: 83 - Thornton Rd -- W 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676135
DATE: Wed, Sep 19 2018

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:05 AM -- 7:20 AM



5-Min Count Period Beginning At	83 - Thornton Rd (Northbound)				83 - Thornton Rd (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	33	11	18	0	0	10	3	0	10	30	28	0	29	38	2	0	212	
7:05 AM	71	11	30	0	1	12	8	0	3	12	30	0	19	31	0	0	228	
7:10 AM	40	2	25	0	2	3	8	0	5	35	36	0	28	43	3	0	230	
7:15 AM	63	10	26	0	1	7	13	0	5	32	33	0	15	41	2	0	248	
7:20 AM	53	12	20	0	2	6	10	0	8	38	11	0	8	32	2	0	202	
7:25 AM	59	10	9	0	0	5	19	0	7	31	11	1	1	39	1	0	193	
7:30 AM	49	3	18	0	1	4	9	0	8	32	7	0	8	58	5	0	202	
7:35 AM	36	8	8	0	0	10	11	0	14	44	6	0	6	57	4	0	204	
7:40 AM	46	14	16	0	3	11	4	0	11	46	6	0	1	42	0	0	200	
7:45 AM	45	15	16	0	1	9	19	0	6	41	17	0	9	51	2	0	231	
7:50 AM	34	8	9	0	0	8	12	0	8	24	10	0	11	52	1	0	177	
7:55 AM	34	5	9	0	0	6	12	0	10	27	14	0	10	61	2	0	190	2517
8:00 AM	19	7	17	0	0	13	14	0	6	24	12	0	7	37	0	0	156	2461
8:05 AM	20	6	6	0	1	2	6	0	8	49	15	0	13	57	1	0	184	2417
8:10 AM	41	14	13	0	0	6	13	0	8	29	12	0	11	40	0	0	187	2374
8:15 AM	33	6	14	0	0	5	9	0	6	27	14	0	17	34	3	0	168	2294
8:20 AM	22	4	10	0	2	5	9	0	3	40	25	0	8	47	3	0	178	2270
8:25 AM	36	7	28	0	1	5	11	0	5	25	7	0	10	34	1	0	170	2247
8:30 AM	29	7	12	0	0	2	6	0	4	21	9	0	8	30	1	0	129	2174
8:35 AM	26	6	9	0	0	7	4	0	3	42	8	0	3	41	1	0	150	2120
8:40 AM	31	9	12	0	1	4	15	0	9	29	7	0	13	28	1	0	159	2079
8:45 AM	19	8	10	0	0	4	11	0	2	34	7	0	9	45	2	0	151	1999
8:50 AM	16	16	13	0	2	5	14	0	4	20	9	0	5	42	2	0	148	1970
8:55 AM	17	11	7	0	2	3	3	0	5	30	7	0	7	29	1	0	122	1902
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	696	92	324	0	16	88	116	0	52	316	396	0	248	460	20	0	2824	
Heavy Trucks	8	0	0		0	4	12		0	12	8		16	16	0		76	
Pedestrians		0				0				0				0			0	
Bicycles		0				0				0				0			0	
Railroad																		
Stopped Buses																		

Comments:

Existing Plus Approved Projects Background Traffic Volume Growth Factors

This file documents the development of Existing Plus Approved Projects (EPAP) conditions background traffic volume forecasts used in the Tra Vigne Project draft environmental impact report transportation and circulation section.

The first two pages following this cover sheet present an April 16, 2007 E-mail message to Mike McDowell, City of Stockton, from Wayne Shijo, KD Anderson & Associates. The E-mail message describes assumptions and approaches used in the development of EPAP background traffic volume forecasts.

The last page of this file present a summary of existing traffic volumes and traffic volume forecasts used to develop screenline growth factors.

In an April 18, 2007 E-mail message, Mike McDowell approved the approach described in the following April 16, 2007 E-mail message.

Wayne Shijo

From: Wayne Shijo [wshijo@kdanderson.com]
Sent: Monday, April 16, 2007 9:56 PM
To: Mike McDowell (Michael.McDowell@ci.stockton.ca.us)
Subject: Bear Creek - EPAP Screenline Growth Factors

Mike –

This is the second of two E-mail messages with responses to comments on the June 2006 draft Bear Creek traffic studies. As I noted in the earlier E-mail message, I would appreciate your review of these data, and the proposed responses to the comments.

The first E-mail message was related to the validity of the existing conditions traffic volumes. This second E-mail message is related to the forecasts used for Existing Plus Approved Projects (EPAP) scenarios.

The draft Bear Creek traffic studies used forecasts from the City's EPAP traffic model. In consultation with you and Gregg Meissner, the model was updated to reflect our current understanding of approve projects. Despite the update, some forecasted traffic volumes from the EPAP model were less than existing traffic volumes. During our November 14, 2006 meeting with Gregg, DKS Associates and ownership group representatives, we discussed how to address roadways with relatively low EPAP traffic volumes. Agreement was reached on application of an alternate approach for developing EPAP background traffic volumes. Rather than using volumes directly from the traffic model, we agreed that growth factors based on screenlines will be applied to existing count data.

The updated EPAP traffic model forecasts volumes lower than existing volumes on certain roadway segments in four locations:

- Roadways north of Eight Mile Road,
- along Eight Mile Road,
- roadways south of Eight Mile Road, and
- along Morada Lane.

Segments along Eight Mile Road, and segments along Morada Lane, are not strictly a screenlines. However, averaging volumes along these roadways fulfills the function of a screenline in avoiding EPAP volumes lower than existing volumes.

The attached file "EPAP Screenline Growth Factors.pdf" shows the calculation of screenline growth factors. The following growth factors are proposed:

- For the roadways north of Eight Mile Road, a 1.10 EPAP growth factor is proposed.
- For Eight Mile Road, a 1.49 EPAP growth factor is proposed.
- For the roadways south of Eight Mile Road, a 1.20 EPAP growth factor is proposed.
- For Morada Lane, a 1.11 EPAP growth factor is proposed.

Please note, the attached file "EPAP Screenline Growth Factors.pdf" shows the calculated screenline growth factor for roadways north of Eight Mile Road is 0.95, a 5% reduction from existing volumes.

This does not seem reasonable, and a growth factor of 1.10, a 10% increase, is proposed.

As noted above, I would appreciate your review of these proposed EPAP growth factors. Please let me know if you have any questions.

Thanks,
Wayne

Wayne Shijo
KD Anderson & Associates
3853 Taylor Road, Suite G
Loomis, CA 95650

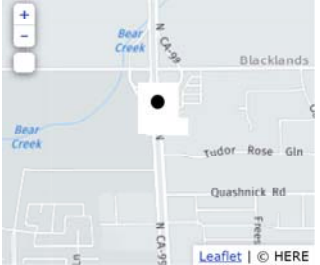
Phone: 916/660-1555
Fax: 916/660-1535
Cell: 916/205-7032

Comparison of Existing Traffic Volumes and EPAP Traffic Model Forecasts

	Existing Volume	EPAP Model Volume	Growth Factor	Source of Existing Volume
I-5 North of Eight Mile Road	76,000	55,614	0.73	Caltrans 2005 Traffic Volumes
SR 99 North of Eight Mile Road	74,000	76,451	1.03	Caltrans 2005 Traffic Volumes
Lower Sacramento Road North of Eight Mile Road	10,338	14,034	1.36	2007 Updated Counts
West Lane North of Eight Mile Road	13,507	19,232	1.42	2007 Updated Counts
Total for North of Eight Mile Road	173,845	165,331	0.95	
Eight Mile Road East of I-5	19,946	27,362	1.37	2007 Updated Counts
Eight Mile Rd Between Lower Sacramento Rd & West Ln	18,344	35,658	1.94	2007 Updated Counts
Eight Mile Road West of SR 99 West Frontage Road	11,376	10,844	0.95	2007 Updated Counts
Total for Eight Mile Road	49,665	73,864	1.49	
I-5 South of Eight Mile Road	94,000	91,569	0.97	Caltrans 2005 Traffic Volumes
SR 99 Between Eight Mile Road & Morada Lane	76,000	89,593	1.18	Caltrans 2005 Traffic Volumes
Thornton Road South of Eight Mile Road	12,655	9,078	0.72	2007 Updated Counts
Davis Road South of Eight Mile Road	8,333	11,943	1.43	2007 Updated Counts
Lower Sacramento Road South of Eight Mile Road	13,153	16,993	1.29	2007 Updated Counts
West Lane South of Eight Mile Road	17,588	18,923	1.08	2007 Updated Counts
Total for South of Eight Mile Road	321,058	385,826	1.20	
Morada Lane East of West Lane	12,128	8,640	0.71	2007 Updated Counts
Morada Lane West of SR 99 West Frontage Road	15,045	21,575	1.43	2007 Updated Counts
Total for Morada Lane	27,173	30,215	1.11	

Mainline VDS 1013910 - S/O Eight Mile Rd

Current Location [Change Log](#) [Performance](#) [Data Quality](#) [Events](#)



Performance > Aggregates > Time of Day [ABOUT THIS REPORT](#)

From: To:
 Min Range: 2 days Max Range: 1 year

Include Days
 Su Mo Tu We Th Fr Sa Holidays

Quantity

Statistics
 Mean, Min, Max
 Mean, Mean+σ, Mean-σ
 Median, %, %
 Discrete Days

[DRAW PLOT](#) [VIEW TABLE](#) [EXPORT TEXT](#) [EXPORT to XLS](#) [EXPORT to PDF](#)

0 0 0

[SR99-N @ CA PM 25.174 \(Abs PM 261.0\)](#)
[District 10, San Joaquin County](#)

Station Details

Aliases: *None*
 LDS: [1013900](#)
 Owner: [Caltrans](#)
 Assoc. Traffic Census Station: *None*
 Comm Type (LDS): *None*
 Speeds: Reported and used in calculations
 Max Cap.: 14.2 Veh/Min (04/01/2017)
 Vehicle Classification: *N/A*

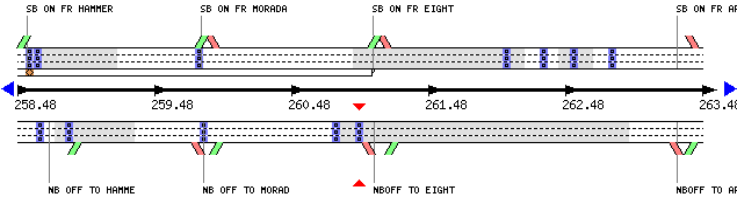
Lane Detection

Lane	Slot	Sensor Tech	Type
1		Dual Loop	Mainline
2		Dual Loop	Mainline
3		Dual Loop	Mainline

Diagnostics

Threshold Set: Urban
 Flow = 0, Occ > 0 (Intermittent): 2%
 High Flow Threshold: 20
 High Occ Threshold: .7
 High Occupancy (High Val): 20%
 Occ = 0; Flow > 0 (Intermittent): 50%
 Repeat Occupancy (Constant): 50
 Occupancy = 0 (Card Off): 59%

Time	Data Quality			# Lane Points	% Observed
	02/25/2020	02/26/2020	02/27/2020		
00:00	420.00	441.00	422.00	108	100.0
01:00	348.00	292.00	365.00	108	100.0
02:00	320.00	356.00	325.00	108	100.0
03:00	515.00	514.00	568.00	108	100.0
04:00	976.00	934.00	931.00	108	100.0
05:00	2,303.00	2,296.00	2,397.00	108	100.0
06:00	3,185.00	3,145.00	3,076.00	108	100.0
07:00	3,180.00	3,113.00	2,929.00	108	100.0
08:00	2,719.00	2,740.00	2,777.00	108	100.0
09:00	2,735.00	2,710.00	2,713.00	108	100.0
10:00	2,465.00	2,522.00	2,571.00	108	100.0
11:00	2,640.00	2,553.00	2,510.00	108	100.0
12:00	2,491.00	2,671.00	2,618.00	108	100.0
13:00	2,814.00	2,964.00	3,017.00	108	100.0
14:00	3,465.00	3,511.00	3,667.00	108	100.0
15:00	3,935.00	3,935.00	3,713.00	108	100.0
16:00	4,033.00	4,120.00	3,620.00	108	100.0
17:00	3,948.00	3,954.00	4,397.00	108	100.0
18:00	2,768.00	2,666.00	2,732.00	108	100.0
19:00	1,781.00	1,890.00	1,890.00	108	100.0
20:00	1,485.00	1,437.00	1,518.00	108	100.0
21:00	1,216.00	1,173.00	1,350.00	108	100.0
22:00	934.00	1,000.00	1,134.00	108	100.0
23:00	574.00	621.00	632.00	108	100.0
Total		51,558	51,872	2,592	100.0



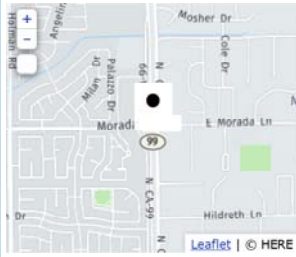
Related Aggregates Reports: [Time Series](#) • [Time of Day](#) • [Day of Week](#) • [Quantity Relationships](#)

Quick Links

- Tools**
- [Holidays](#)
 - [Data Clearinghouse](#)
 - [PeMS User Manual](#)
 - [Transit PeMS User Manual](#)
 - [Lane Closure Manual](#)
 - [District TCR Training Guide](#)
 - [PeMS Forum \(External Site\)](#)

Mainline VDS 1014410 - Morada Lane

Current Location



Change Log Performance Data Quality Events

Performance > Aggregates > Time of Day

ABOUT THIS REPORT

From: 02/25/2020 To: 02/27/2020
 Min Range: 2 days Max Range: 1 year

Include Days: Su Mo Tu We Th Fr Sa Holidays

Quantity: Flow

Statistics: Mean, Min, Max Mean, Mean+σ, Mean-σ Median, 25%, 75% Discrete Days

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Maps Real-Time Performance Inventory

SR99-S @ CA PM 24.026 (Abs PM 259.8) District 10, San Joaquin County

Station Details

Aliases: None
 LDS: 1014300
 Owner: Caltrans
 Assoc. Traffic Census Station: None
 Comm Type (LDS):
 Speeds: Reported and used in calculations
 Max Cap.: 0.2 Veh/Min (04/01/2017)
 Vehicle Classification: N/A

Lane Detection

Lane	Slot	Sensor Tech	Type
1		Dual Loop	Mainline
2		Dual Loop	Mainline
3		Dual Loop	Mainline

Diagnostics

Threshold Set: Urban
 Flow = 0, Occ > 0 (Intermittent): 2%
 High Flow Threshold: 20
 High Occ Threshold: .7
 High Occupancy (High Val): 20%
 Occ = 0; Flow > 0 (Intermittent): 50%
 Repeat Occupancy (Constant): 50
 Occupancy = 0 (Card Off): 59%

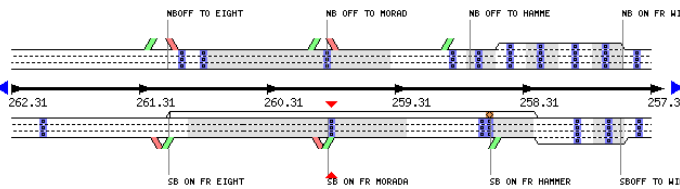
Quick Links

View another VDS Go

Tools

- [Holidays](#)
- [Data Clearinghouse](#)
- [PeMS User Manual](#)
- [Transit PeMS User Manual](#)
- [Lane Closure Manual](#)
- [District TCR Training Guide](#)
- [PeMS Forum \(External Site\)](#)

Time	Data Quality			#	Lane Points	% Observed
	02/25/2020	02/26/2020	02/27/2020			
00:00	341.00	329.00	360.00	108	100.0	
01:00	179.00	220.00	208.00	108	100.0	
02:00	275.00	275.00	277.00	108	100.0	
03:00	480.00	494.00	511.00	108	100.0	
04:00	864.00	902.00	921.00	108	100.0	
05:00	1,856.00	1,876.00	1,852.00	108	100.0	
06:00	3,058.00	3,068.00	3,113.00	108	100.0	
07:00	3,864.00	3,948.00	3,909.00	108	100.0	
08:00	2,762.00	2,780.00	2,812.00	108	100.0	
09:00	2,160.00	2,151.00	2,185.00	108	100.0	
10:00	2,043.00	2,037.00	2,127.00	108	100.0	
11:00	2,149.00	2,191.00	2,212.00	108	100.0	
12:00	2,278.00	2,362.00	2,337.00	108	100.0	
13:00	2,395.00	2,590.00	2,682.00	108	100.0	
14:00	2,879.00	2,922.00	2,944.00	108	100.0	
15:00	3,411.00	3,102.00	3,333.00	108	100.0	
16:00	3,212.00	3,208.00	3,100.00	108	100.0	
17:00	3,082.00	2,944.00	2,899.00	108	100.0	
18:00	2,374.00	2,158.00	2,276.00	108	100.0	
19:00	1,512.00	1,538.00	1,573.00	108	100.0	
20:00	1,170.00	1,156.00	1,294.00	108	100.0	
21:00	907.00	956.00	1,083.00	108	100.0	
22:00	647.00	721.00	756.00	108	100.0	
23:00	498.00	497.00	555.00	108	100.0	
Total		44,425	45,319	2,592	100.0	



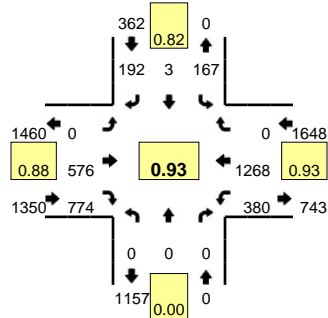
Related Aggregates Reports: Time Series • Time of Day • Day of Week • Quantity Relationships

Type of peak hour being reported: Intersection Peak

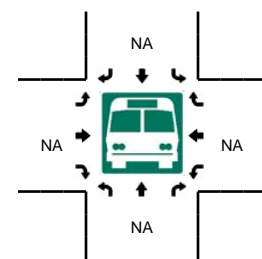
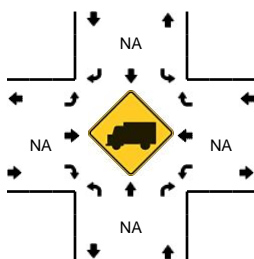
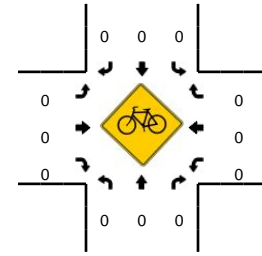
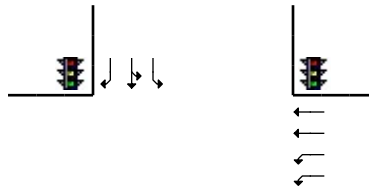
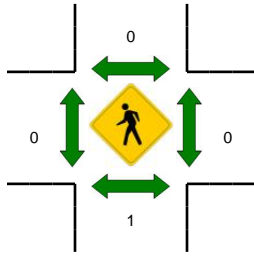
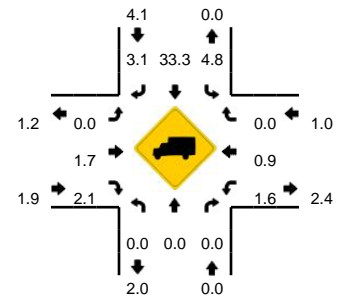
Method for determining peak hour: Total Entering Volume

LOCATION: 65 - I-5 SB Ramps -- W 8 Mile Rd
CITY/STATE: Stockton, CA

QC JOB #: 147676112
DATE: Wed, Sep 19 2018



Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

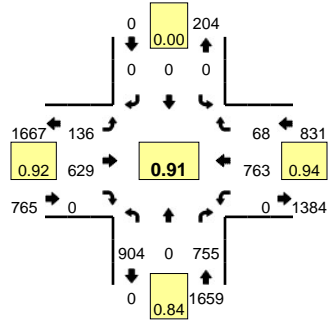


5-Min Count Period Beginning At	65 - I-5 SB Ramps (Northbound)				65 - I-5 SB Ramps (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	14	0	16	0	0	42	59	0	25	101	0	0	257	
4:05 PM	0	0	0	0	10	0	14	0	0	55	67	0	32	92	0	0	270	
4:10 PM	0	0	0	0	19	0	9	0	0	56	79	0	31	93	0	0	287	
4:15 PM	0	0	0	0	5	0	8	0	0	52	65	0	20	94	0	0	244	
4:20 PM	0	0	0	0	20	2	13	0	0	36	58	0	30	87	0	0	246	
4:25 PM	0	0	0	0	11	0	13	0	0	60	58	0	20	95	0	0	257	
4:30 PM	0	0	0	0	13	0	7	0	0	50	56	0	42	97	0	0	265	
4:35 PM	0	0	0	0	15	0	16	0	0	56	76	0	21	91	0	0	275	
4:40 PM	0	0	0	0	24	1	12	0	0	43	61	0	26	84	0	0	251	
4:45 PM	0	0	0	0	11	1	18	0	0	57	58	0	44	115	0	0	304	
4:50 PM	0	0	0	0	14	1	16	0	0	40	52	0	34	109	0	0	266	
4:55 PM	0	0	0	0	9	0	16	0	0	38	59	0	27	95	0	0	244	3166
5:00 PM	0	0	0	0	15	0	14	0	0	48	57	0	24	99	0	0	257	3166
5:05 PM	0	0	0	0	18	0	14	0	0	44	88	0	32	95	0	0	291	3187
5:10 PM	0	0	0	0	12	0	12	0	0	57	72	0	33	116	0	0	302	3202
5:15 PM	0	0	0	0	11	0	12	0	0	54	72	0	39	104	0	0	292	3250
5:20 PM	0	0	0	0	24	0	23	0	0	44	60	0	37	117	0	0	305	3309
5:25 PM	0	0	0	0	11	1	17	0	0	59	68	0	20	85	0	0	261	3313
5:30 PM	0	0	0	0	18	0	21	0	0	42	62	0	46	118	0	0	307	3355
5:35 PM	0	0	0	0	10	0	14	0	0	44	69	0	23	100	0	0	260	3340
5:40 PM	0	0	0	0	14	0	15	0	0	49	57	0	21	115	0	0	271	3360
5:45 PM	0	0	0	0	20	0	10	0	0	50	71	0	26	102	0	0	279	3335
5:50 PM	0	0	0	0	16	0	15	0	0	30	51	0	36	127	0	0	275	3344
5:55 PM	0	0	0	0	12	0	12	0	0	49	46	0	33	106	0	0	258	3358
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	188	0	188	0	0	620	816	0	436	1348	0	0	3596	
Heavy Trucks	0	0	0	0	12	0	8	0	0	0	16	0	4	8	0	0	48	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

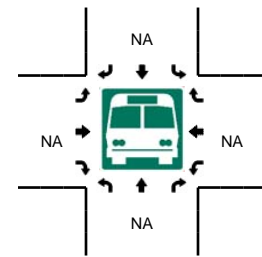
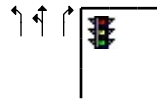
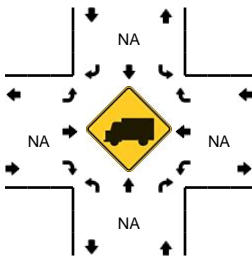
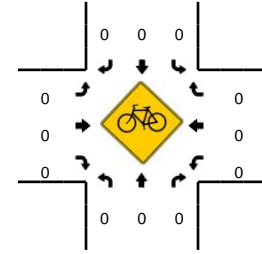
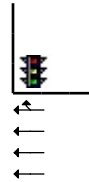
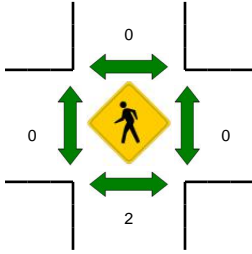
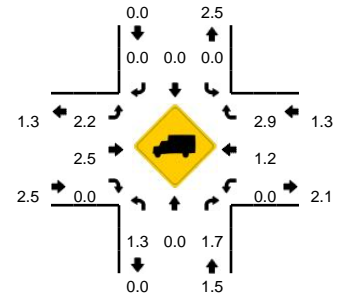
Comments:

LOCATION: 66 - I-5 NB Ramps -- W 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676114
DATE: Wed, Sep 19 2018



Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

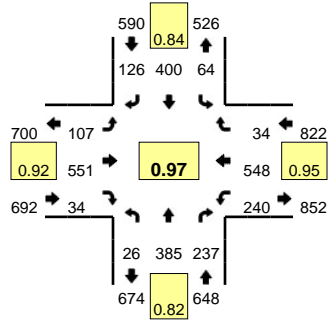


5-Min Count Period Beginning At	66 - I-5 NB Ramps (Northbound)				66 - I-5 NB Ramps (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	55	0	33	0	0	0	0	0	8	56	0	0	0	61	4	0	217	
4:05 PM	73	1	46	0	0	0	0	0	8	52	0	0	0	56	10	0	246	
4:10 PM	66	0	42	0	0	0	0	0	13	57	0	0	0	49	9	0	236	
4:15 PM	60	0	58	0	0	0	0	0	13	54	0	0	0	53	10	0	248	
4:20 PM	66	0	61	0	0	0	0	0	14	41	0	0	0	54	13	0	249	
4:25 PM	67	1	48	0	0	0	0	0	21	49	0	0	0	53	2	0	241	
4:30 PM	76	0	61	0	0	0	0	0	14	46	0	0	0	59	7	0	263	
4:35 PM	64	0	64	0	0	0	0	0	13	56	0	0	0	63	5	0	265	
4:40 PM	49	0	58	0	0	0	0	0	7	68	0	0	0	59	8	0	249	
4:45 PM	91	0	67	0	0	0	0	0	11	46	0	0	0	58	7	0	280	
4:50 PM	72	0	49	0	0	0	0	0	10	48	0	0	0	67	7	0	253	
4:55 PM	75	0	57	0	0	0	0	0	7	33	0	0	0	54	8	0	234	2981
5:00 PM	66	0	63	0	0	0	0	0	13	53	0	0	0	57	7	0	259	3023
5:05 PM	69	0	53	0	0	0	0	0	13	63	0	0	0	50	7	0	255	3032
5:10 PM	91	0	71	0	0	0	0	0	10	49	0	0	0	72	4	0	297	3093
5:15 PM	76	0	79	0	0	0	0	0	15	43	0	0	0	70	6	0	289	3134
5:20 PM	90	0	87	0	0	0	0	0	11	57	0	0	0	58	2	0	305	3190
5:25 PM	65	0	64	0	0	0	0	0	11	57	0	0	0	67	8	0	272	3221
5:30 PM	61	0	60	0	0	0	0	0	14	57	0	0	0	84	4	0	280	3238
5:35 PM	79	0	48	0	0	0	0	0	6	38	0	0	0	50	7	0	228	3201
5:40 PM	66	0	64	0	0	0	0	0	12	67	0	0	0	62	7	0	278	3230
5:45 PM	67	0	60	0	0	0	0	0	11	48	0	0	0	70	4	0	260	3210
5:50 PM	102	0	50	0	0	0	0	0	4	35	0	0	0	71	6	0	268	3225
5:55 PM	72	0	56	0	0	0	0	0	16	62	0	0	0	52	6	0	264	3255
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	1028	0	948	0	0	0	0	0	144	596	0	0	0	800	48	0	3564	
Heavy Trucks	12	0	4	0	0	0	0	0	0	16	0	0	0	4	0	0	36	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

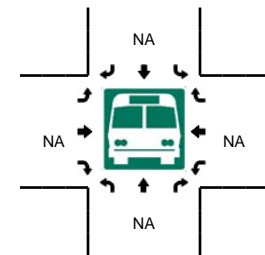
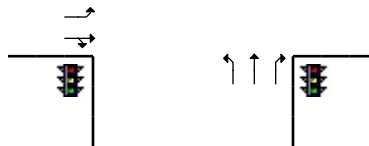
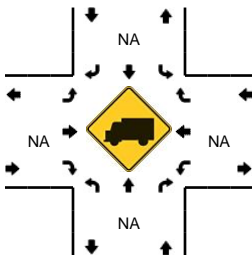
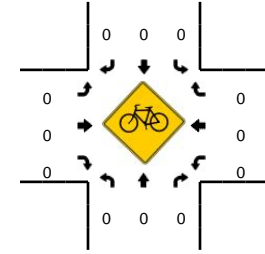
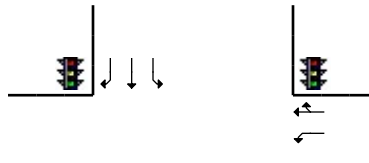
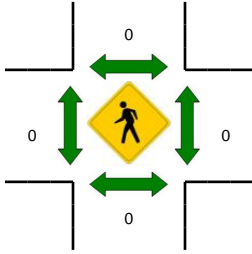
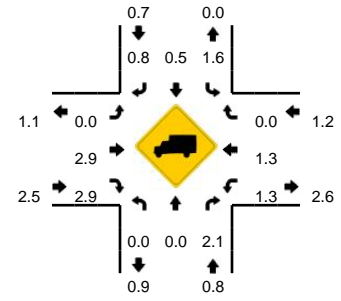
Comments:

LOCATION: 82 - Lower Sacramento Rd -- E 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676134
DATE: Wed, Sep 26 2018



Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

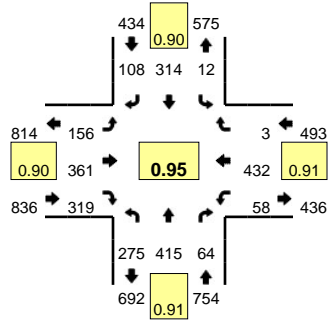


5-Min Count Period Beginning At	82 - Lower Sacramento Rd (Northbound)				82 - Lower Sacramento Rd (Southbound)				E 8 Mile Rd (Eastbound)				E 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	32	20	0	4	21	5	0	8	26	4	0	18	37	2	0	178	
4:05 PM	4	30	14	0	4	21	3	0	5	38	0	0	16	51	2	0	188	
4:10 PM	2	28	20	0	3	30	19	0	8	48	4	0	18	39	5	0	224	
4:15 PM	3	18	14	0	5	22	6	0	10	46	0	0	24	37	3	0	188	
4:20 PM	1	27	14	0	6	35	18	0	11	28	2	0	26	38	4	0	210	
4:25 PM	1	32	25	0	3	16	8	0	8	58	4	0	19	46	4	0	224	
4:30 PM	4	35	21	0	6	28	8	0	2	28	1	0	24	31	7	0	195	
4:35 PM	2	26	6	0	6	12	4	0	7	63	5	0	13	40	10	0	194	
4:40 PM	3	31	28	0	9	46	11	0	6	42	0	0	15	44	7	0	242	
4:45 PM	3	33	21	0	4	32	14	0	10	38	1	0	18	46	3	0	223	
4:50 PM	0	42	27	0	8	46	8	0	9	34	3	0	20	35	1	0	233	
4:55 PM	1	30	20	0	4	26	7	0	9	41	2	0	22	46	4	0	212	2511
5:00 PM	1	21	13	0	2	23	11	0	7	55	5	0	22	51	1	0	212	2545
5:05 PM	3	41	19	0	5	30	4	0	7	38	4	0	20	39	4	0	214	2571
5:10 PM	3	28	22	0	5	27	14	0	14	44	2	0	15	48	4	0	226	2573
5:15 PM	0	29	17	0	6	39	13	0	14	50	2	0	20	55	4	0	249	2634
5:20 PM	5	31	13	0	7	42	9	0	5	42	3	0	19	38	6	0	220	2644
5:25 PM	2	40	15	0	5	42	13	0	7	52	1	0	18	46	0	0	241	2661
5:30 PM	6	28	20	0	6	30	12	0	9	45	2	0	30	53	0	0	241	2707
5:35 PM	1	23	16	0	4	24	11	0	9	55	5	0	19	47	5	0	219	2732
5:40 PM	2	30	22	0	6	32	15	0	8	54	2	0	17	46	3	0	237	2727
5:45 PM	2	42	33	0	6	39	9	0	9	41	3	0	18	44	2	0	248	2752
5:50 PM	4	42	21	0	6	22	8	0	12	33	1	0	14	27	2	0	192	2711
5:55 PM	1	32	22	0	3	31	9	0	9	49	1	0	15	44	3	0	219	2718
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	28	400	180	0	72	492	140	0	104	576	24	0	228	556	40	0	2840	
Heavy Trucks	0	0	8		0	0	0		0	20	0		0	8	0		36	
Pedestrians		0				0				0				0			0	
Bicycles		0	0			0	0			0	0			0	0		0	
Railroad																		
Stopped Buses																		

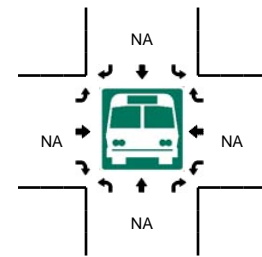
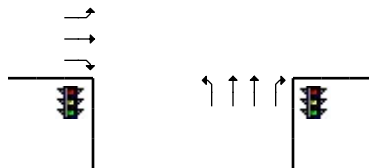
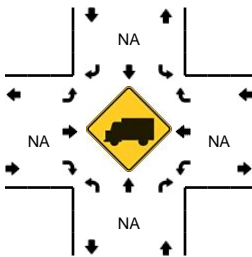
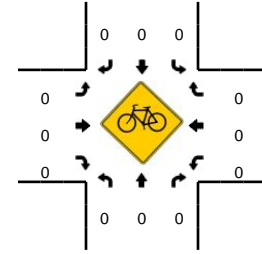
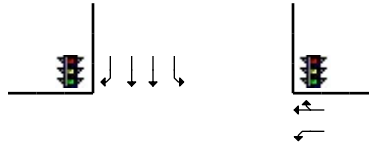
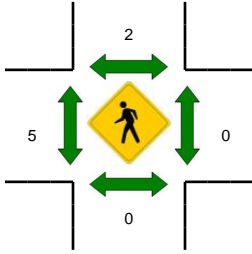
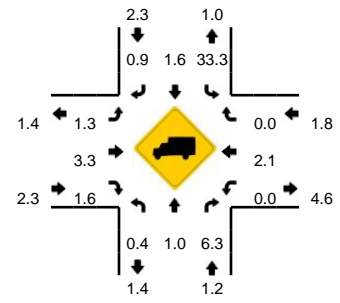
Comments:

LOCATION: 26 - West Ln -- E 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 14767638
DATE: Tue, Sep 25 2018



Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

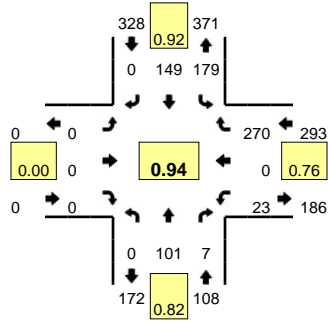


5-Min Count Period Beginning At	26 - West Ln (Northbound)				26 - West Ln (Southbound)				E 8 Mile Rd (Eastbound)				E 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	20	30	8	0	1	15	7	0	4	35	24	0	3	38	1	0	186	
4:05 PM	23	30	6	0	0	16	10	1	8	23	28	0	7	33	1	0	186	
4:10 PM	19	31	9	0	0	17	12	1	4	25	30	0	5	39	0	0	192	
4:15 PM	21	14	10	0	0	15	12	1	8	38	22	0	3	29	0	0	173	
4:20 PM	24	36	9	1	0	16	11	0	9	24	19	0	6	28	0	0	183	
4:25 PM	25	35	4	0	0	28	9	1	14	35	24	0	6	37	1	0	219	
4:30 PM	24	28	6	0	2	24	10	0	15	31	20	0	6	20	1	0	187	
4:35 PM	29	54	7	0	1	21	7	0	9	24	18	0	3	34	0	0	207	
4:40 PM	30	25	6	0	1	30	14	0	12	38	37	0	3	33	0	0	229	
4:45 PM	19	39	2	0	1	32	10	0	14	35	25	0	6	30	0	0	213	
4:50 PM	11	34	7	0	1	23	10	1	9	28	24	0	7	32	0	0	187	
4:55 PM	27	24	9	0	3	20	11	0	19	32	17	0	3	43	0	0	208	2370
5:00 PM	17	38	6	0	1	28	6	0	18	19	23	0	9	35	0	0	200	2384
5:05 PM	29	25	10	0	0	18	2	0	11	38	24	0	3	38	1	0	199	2397
5:10 PM	16	32	4	0	0	22	14	0	10	34	39	0	7	43	0	0	221	2426
5:15 PM	35	42	5	0	1	55	12	0	11	23	27	0	2	28	1	0	242	2495
5:20 PM	16	27	5	0	2	15	8	0	9	38	28	0	5	48	0	0	201	2513
5:25 PM	23	38	3	0	0	29	6	0	15	24	16	0	2	35	0	0	191	2485
5:30 PM	35	41	3	1	0	17	9	0	17	26	29	0	3	32	1	0	214	2512
5:35 PM	18	19	8	0	1	24	10	0	10	26	32	0	6	40	0	0	194	2499
5:40 PM	28	56	2	0	1	31	10	0	13	38	35	0	5	28	0	0	247	2517
5:45 PM	17	24	5	0	0	17	10	0	11	26	23	0	13	26	0	0	172	2476
5:50 PM	13	28	6	0	3	18	9	0	16	36	40	0	2	23	1	0	195	2484
5:55 PM	23	32	8	0	1	18	6	0	14	31	19	0	6	30	0	0	188	2464
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	268	404	56	0	12	368	136	0	120	380	376	0	56	476	4	0	2656	
Heavy Trucks	0	0	0		4	0	0		0	20	8		0	4	0		36	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

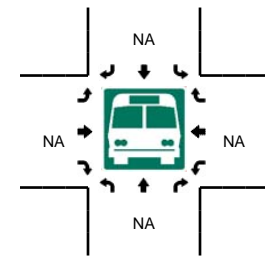
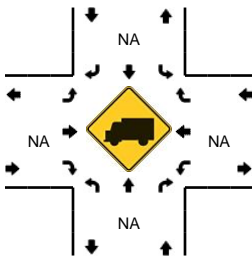
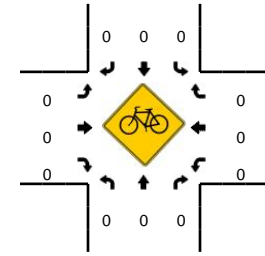
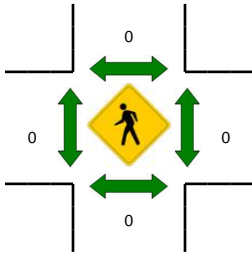
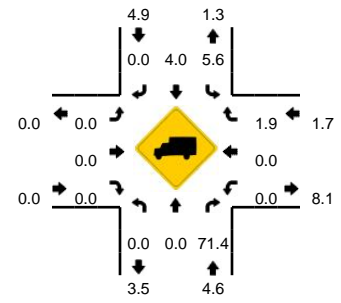
Comments:

LOCATION: 64 - 99 Frontage Rd -- Hwy 99 SB Ramps
CITY/STATE: San Joaquin, CA

QC JOB #: 147676110
DATE: Tue, Sep 25 2018



Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

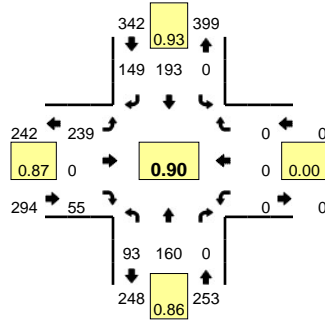


5-Min Count Period Beginning At	64 - 99 Frontage Rd (Northbound)				64 - 99 Frontage Rd (Southbound)				Hwy 99 SB Ramps (Eastbound)				Hwy 99 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	5	0	0	22	5	0	0	0	0	0	0	1	0	25	0	58	
4:05 PM	0	10	0	0	18	11	0	0	0	0	0	0	0	0	15	0	54	
4:10 PM	0	8	0	0	15	10	0	0	0	0	0	0	0	0	18	1	52	
4:15 PM	0	11	0	0	19	8	0	0	0	0	0	0	0	0	20	0	58	
4:20 PM	0	8	0	0	17	9	0	0	0	0	0	0	4	0	18	0	56	
4:25 PM	0	6	0	0	10	6	0	0	0	0	0	0	5	0	23	0	50	
4:30 PM	0	7	2	0	17	8	0	0	0	0	0	0	1	0	15	0	50	
4:35 PM	0	9	0	0	15	6	0	0	0	0	0	0	3	0	29	0	62	
4:40 PM	0	8	0	0	18	10	0	0	0	0	0	0	3	0	32	0	71	
4:45 PM	0	9	1	0	14	7	0	0	0	0	0	0	3	0	28	0	62	
4:50 PM	0	11	1	0	16	18	0	0	0	0	0	0	0	0	10	0	56	
4:55 PM	0	9	0	0	14	12	0	0	0	0	0	0	1	0	23	0	59	688
5:00 PM	0	4	0	0	17	12	0	0	0	0	0	0	5	0	26	0	64	694
5:05 PM	0	6	0	0	15	10	0	0	0	0	0	0	1	0	19	0	51	691
5:10 PM	0	10	1	0	18	13	0	0	0	0	0	0	3	0	20	0	65	704
5:15 PM	0	7	1	0	17	11	0	0	0	0	0	0	1	0	22	0	59	705
5:20 PM	0	7	0	0	11	13	0	0	0	0	0	0	0	0	17	0	48	697
5:25 PM	0	9	1	0	12	19	0	0	0	0	0	0	2	0	24	0	67	714
5:30 PM	0	9	0	0	10	13	0	0	0	0	0	0	1	0	26	0	59	723
5:35 PM	0	12	2	0	17	11	0	0	0	0	0	0	3	0	23	0	68	729
5:40 PM	0	5	0	0	14	15	0	0	0	0	0	0	2	0	14	0	50	708
5:45 PM	0	7	0	0	19	18	0	0	0	0	0	0	5	0	20	0	69	715
5:50 PM	0	4	0	0	16	18	0	0	0	0	0	0	2	0	20	0	60	719
5:55 PM	0	2	0	0	10	16	0	0	0	0	0	0	2	0	24	0	54	714
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	120	12	0	156	172	0	0	0	0	0	0	24	0	292	0	776	
Heavy Trucks	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	8	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

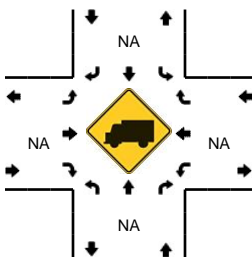
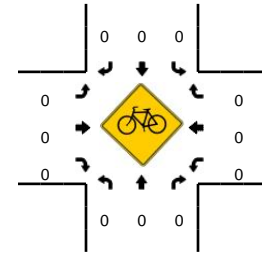
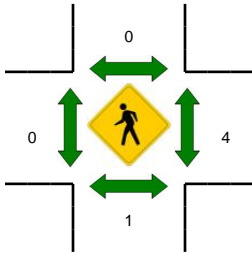
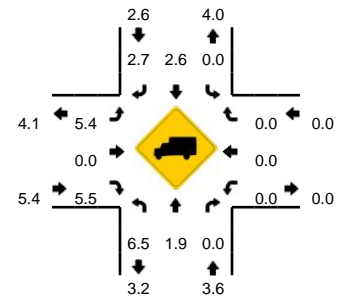
Comments:

LOCATION: 9 - 99 Frontage Rd -- Hwy 99 NB Ramps
CITY/STATE: San Joaquin, CA

QC JOB #: 14767616
DATE: Tue, Sep 25 2018



Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

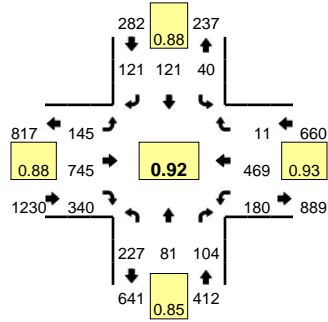


5-Min Count Period Beginning At	9 - 99 Frontage Rd (Northbound)				9 - 99 Frontage Rd (Southbound)				Hwy 99 NB Ramps (Eastbound)				Hwy 99 NB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	13	0	0	0	11	8	0	17	0	5	0	0	0	0	0	61	
4:05 PM	3	15	0	0	0	8	13	0	20	0	2	0	0	0	0	0	61	
4:10 PM	4	11	0	0	0	11	10	0	18	0	3	0	0	0	0	0	57	
4:15 PM	7	11	0	0	0	11	12	0	14	0	4	0	0	0	0	0	59	
4:20 PM	7	13	0	0	0	6	12	0	24	0	7	0	0	0	0	0	69	
4:25 PM	7	9	0	0	0	17	5	0	17	0	5	0	0	0	0	0	60	
4:30 PM	6	8	0	0	0	17	14	0	17	0	7	0	0	0	0	0	69	
4:35 PM	8	15	0	0	0	14	11	0	20	0	3	0	0	0	0	0	71	
4:40 PM	5	13	0	0	0	21	15	0	25	0	3	0	0	0	0	0	82	
4:45 PM	14	14	0	0	0	18	14	0	16	0	6	0	0	0	0	0	82	
4:50 PM	7	14	0	0	0	15	11	0	29	0	6	0	0	0	0	0	82	
4:55 PM	9	17	0	0	0	17	16	0	17	0	4	0	0	0	0	0	80	833
5:00 PM	6	12	0	0	0	11	14	0	12	0	2	0	0	0	0	0	57	829
5:05 PM	4	15	0	0	0	16	16	0	21	0	4	0	0	0	0	0	76	844
5:10 PM	6	17	0	0	0	10	16	0	22	0	8	0	0	0	0	0	79	866
5:15 PM	5	19	0	0	0	11	11	0	16	0	4	0	0	0	0	0	66	873
5:20 PM	5	5	0	0	0	19	12	0	18	0	1	0	0	0	0	0	60	864
5:25 PM	14	7	0	0	0	22	8	0	25	0	3	0	0	0	0	0	79	883
5:30 PM	6	10	0	0	0	19	6	0	19	0	11	0	0	0	0	0	71	885
5:35 PM	12	17	0	0	0	14	10	0	19	0	3	0	0	0	0	0	75	889
5:40 PM	12	10	0	0	0	10	8	0	13	0	3	0	0	0	0	0	56	863
5:45 PM	9	13	0	0	0	6	15	0	20	0	1	0	0	0	0	0	64	845
5:50 PM	5	8	0	0	0	13	11	0	22	0	1	0	0	0	0	0	60	823
5:55 PM	4	13	0	0	0	15	7	0	14	0	5	0	0	0	0	0	58	801
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	104	164	0	0	0	216	160	0	280	0	60	0	0	0	0	0	984	
Heavy Trucks	4	8	0	0	0	4	4	0	36	0	8	0	0	0	0	0	64	
Pedestrians		0				0				0			4				4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

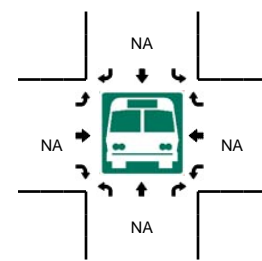
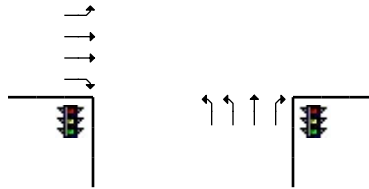
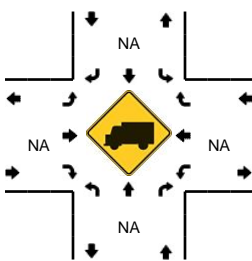
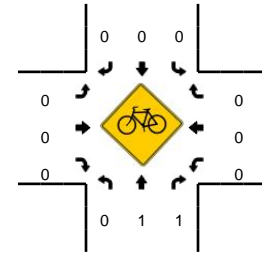
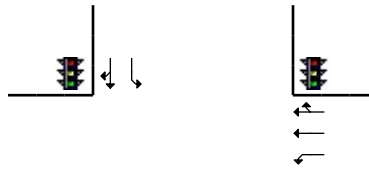
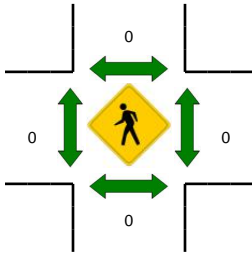
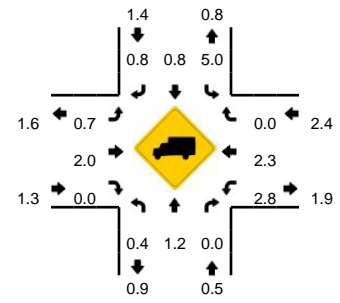
Comments:

LOCATION: 83 - Thornton Rd -- W 8 Mile Rd
CITY/STATE: San Joaquin, CA

QC JOB #: 147676136
DATE: Wed, Sep 19 2018



Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:15 PM -- 5:30 PM



5-Min Count Period Beginning At	83 - Thornton Rd (Northbound)				83 - Thornton Rd (Southbound)				W 8 Mile Rd (Eastbound)				W 8 Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	24	12	14	0	2	7	7	0	5	44	22	0	11	38	3	0	189	
4:05 PM	26	13	9	0	2	10	10	0	12	63	20	0	11	30	2	0	208	
4:10 PM	17	7	5	0	1	12	8	0	16	43	18	0	13	37	0	0	177	
4:15 PM	15	9	11	0	4	11	6	0	6	57	28	0	7	38	2	0	194	
4:20 PM	18	5	9	0	3	9	7	0	15	58	21	0	13	36	2	0	196	
4:25 PM	17	8	1	0	6	10	10	0	9	42	24	0	15	46	2	0	190	
4:30 PM	23	8	9	0	4	7	6	0	17	53	18	0	13	34	2	0	194	
4:35 PM	15	6	13	0	6	11	10	0	7	65	36	0	19	34	0	0	222	
4:40 PM	16	1	12	0	1	12	8	0	15	81	33	0	17	46	1	0	243	
4:45 PM	26	6	1	0	5	14	13	0	13	60	17	0	17	31	1	0	204	
4:50 PM	21	10	13	0	4	8	9	0	10	51	33	0	9	36	1	0	205	
4:55 PM	17	7	8	0	5	10	11	0	6	60	21	0	9	40	0	0	194	2416
5:00 PM	13	5	5	0	5	5	6	0	9	49	28	0	12	45	2	0	184	2411
5:05 PM	21	6	7	0	0	11	11	0	14	53	28	0	12	34	1	0	198	2401
5:10 PM	23	9	5	0	2	10	8	0	17	66	30	0	12	40	2	0	224	2448
5:15 PM	12	11	8	0	2	11	14	0	18	64	32	0	18	46	2	0	238	2492
5:20 PM	21	8	12	0	1	5	8	0	11	81	29	0	20	37	0	0	233	2529
5:25 PM	25	7	9	0	5	17	14	0	10	61	33	0	16	36	0	0	233	2572
5:30 PM	17	5	11	0	4	7	9	0	15	54	20	0	19	44	1	0	206	2584
5:35 PM	11	3	5	0	2	9	7	0	9	67	23	0	7	44	1	0	188	2550
5:40 PM	20	5	12	0	3	3	4	0	15	53	36	0	8	42	0	0	201	2508
5:45 PM	27	4	9	0	2	12	8	0	10	51	31	0	11	46	2	0	213	2517
5:50 PM	27	3	11	0	2	8	6	0	14	55	27	0	10	32	1	0	196	2508
5:55 PM	13	7	8	0	2	6	7	0	6	59	31	0	13	38	0	0	190	2504
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	232	104	116	0	32	132	144	0	156	824	376	0	216	476	8	0	2816	
Heavy Trucks	0	0	0	0	0	0	0	0	0	16	0	0	4	12	0	0	32	
Pedestrians		0				0				0				0			0	
Bicycles		0	1			0	0	0		0	0	0		0	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

CLASSIFICATION

West Lane north of Armstrong Road

Day: Tuesday
Date: 11/3/2015City: San Joaquin County
Project #: 15-7805-038n**Summary**

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	57	11	1	3	1	0	0	0	0	0	0	0	73
01:00	0	33	5	0	3	0	0	2	0	0	0	0	0	43
02:00	0	42	4	0	8	0	0	0	0	0	0	0	0	54
03:00	0	30	8	0	3	0	0	0	0	0	0	0	0	41
04:00	0	76	18	0	6	0	0	0	0	0	0	0	0	100
05:00	0	150	41	0	24	0	0	0	0	0	0	0	0	215
06:00	1	373	126	5	55	1	0	0	1	0	0	0	0	562
07:00	0	858	224	7	77	4	0	0	1	0	0	0	0	1171
08:00	0	731	164	9	68	0	0	2	1	0	0	0	0	975
09:00	1	532	140	8	70	0	0	0	1	0	0	0	0	752
10:00	0	587	152	3	61	2	0	0	0	0	0	0	0	805
11:00	1	624	126	3	62	0	0	2	0	0	0	0	0	818
12:00 PM	1	706	146	7	57	0	0	2	1	0	0	0	0	920
13:00	2	771	154	6	63	1	0	1	0	0	0	0	0	998
14:00	4	875	201	7	68	1	0	1	0	0	0	0	0	1157
15:00	0	944	182	5	75	1	0	1	0	0	0	0	0	1208
16:00	0	958	178	2	68	0	0	0	1	0	0	0	0	1207
17:00	0	1062	167	2	55	0	0	0	0	0	0	0	0	1286
18:00	0	610	119	2	38	0	0	0	0	0	0	0	0	769
19:00	1	455	96	0	34	0	0	0	0	0	0	0	0	586
20:00	0	358	51	0	35	0	0	0	0	0	0	0	0	444
21:00	0	245	39	0	25	0	0	0	0	0	0	0	0	309
22:00	0	186	29	0	13	0	0	0	0	0	0	0	0	228
23:00	0	124	12	0	20	0	0	0	0	0	0	0	0	156
Totals	11	11387	2393	67	991	11		11	6					14877
% of Totals	0%	77%	16%	0%	7%	0%		0%	0%					100%

AM Volumes	3	4093	1019	36	440	8	0	6	4	0	0	0	0	5609
% AM	0%	28%	7%	0%	3%	0%		0%	0%					38%
AM Peak Hour	06:00	07:00	07:00	08:00	07:00	07:00		01:00	06:00					07:00
Volume	1	858	224	9	77	4		2	1					1171
PM Volumes	8	7294	1374	31	551	3	0	5	2	0	0	0	0	9268
% PM	0%	49%	9%	0%	4%	0%		0%	0%					62%
PM Peak Hour	14:00	17:00	14:00	12:00	15:00	13:00		12:00	12:00					17:00
Volume	4	1062	201	7	75	1		2	1					1286

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	2146	↔ 14%	1918	↔ 13%	2493	↔ 17%	8320	↔ 56%

Classification Definitions

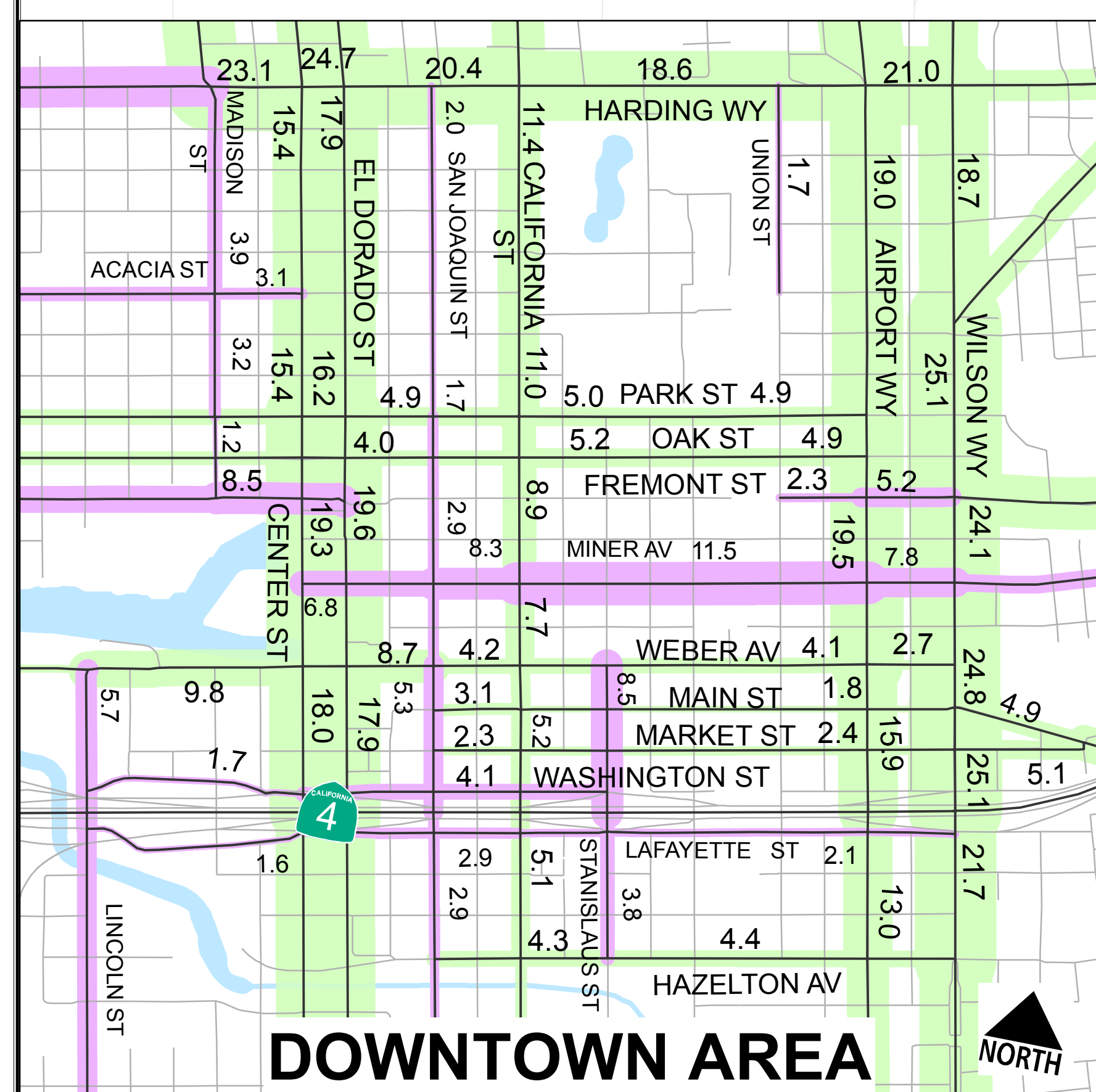
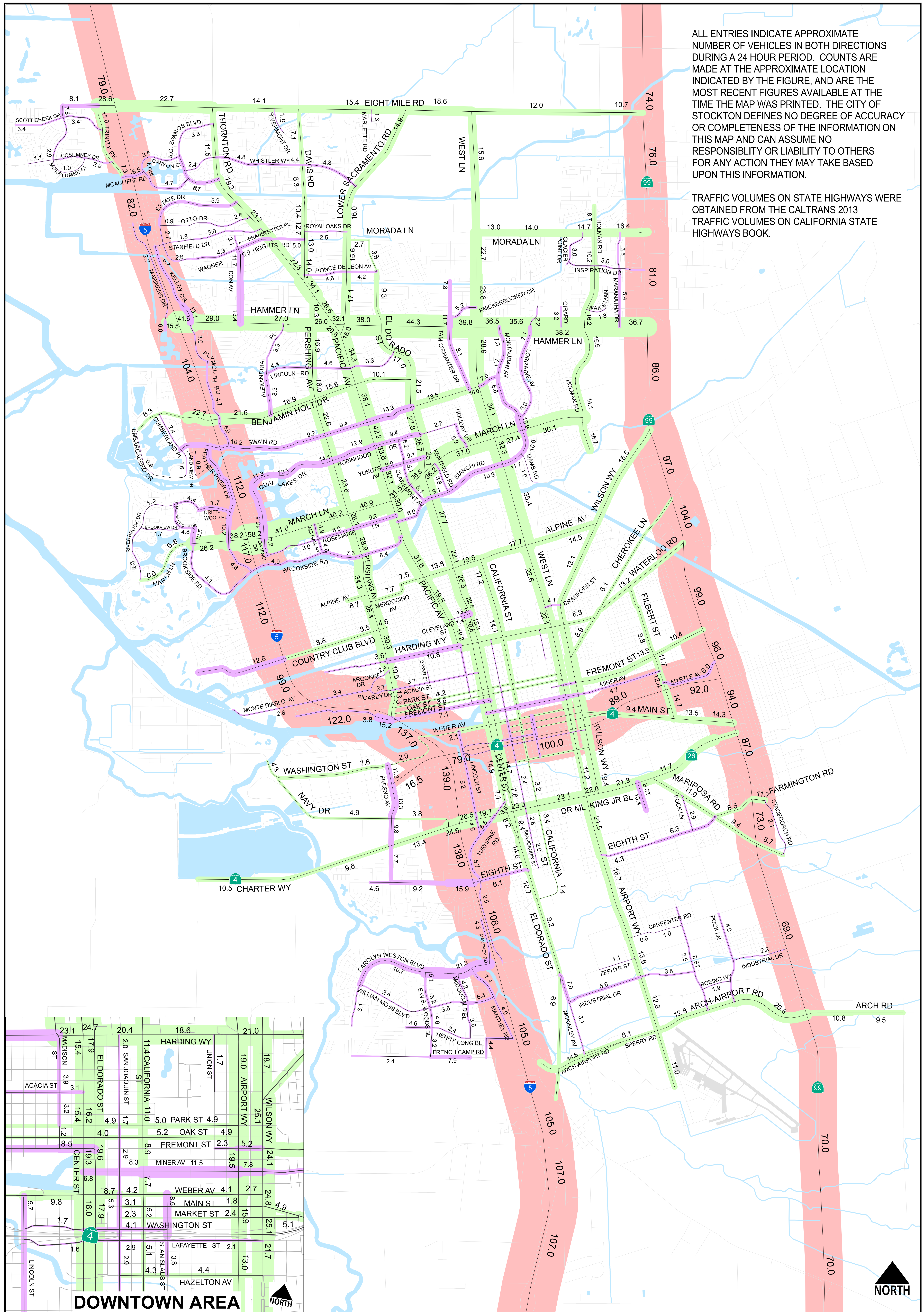
1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

2014 TRAFFIC VOLUME FLOW MAP

CITY OF STOCKTON

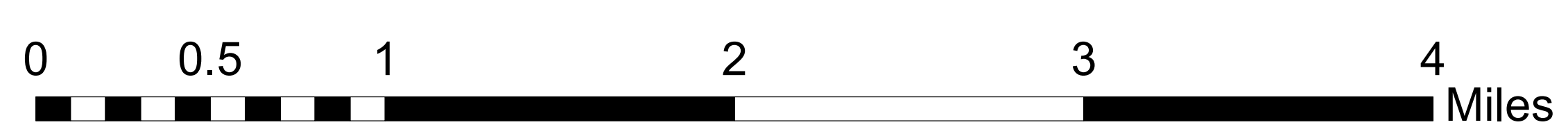
ALL ENTRIES INDICATE APPROXIMATE NUMBER OF VEHICLES IN BOTH DIRECTIONS DURING A 24 HOUR PERIOD. COUNTS ARE MADE AT THE APPROXIMATE LOCATION INDICATED BY THE FIGURE, AND ARE THE MOST RECENT FIGURES AVAILABLE AT THE TIME THE MAP WAS PRINTED. THE CITY OF STOCKTON DEFINES NO DEGREE OF ACCURACY OR COMPLETENESS OF THE INFORMATION ON THIS MAP AND CAN ASSUME NO RESPONSIBILITY OR LIABILITY TO OTHERS FOR ANY ACTION THEY MAY TAKE BASED UPON THIS INFORMATION.

TRAFFIC VOLUMES ON STATE HIGHWAYS WERE OBTAINED FROM THE CALTRANS 2013 TRAFFIC VOLUMES ON CALIFORNIA STATE HIGHWAYS BOOK.



- Water
- Freeway
- Arterial
- Collector/Local
- Counted Street

Average Daily Traffic in Thousands



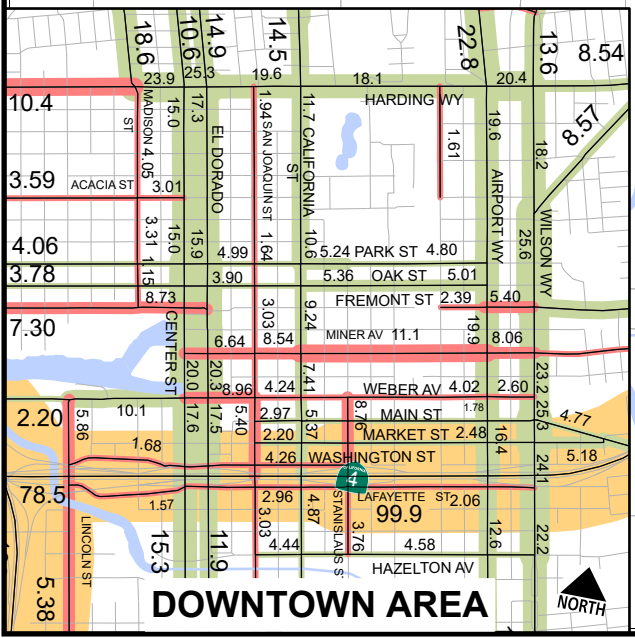
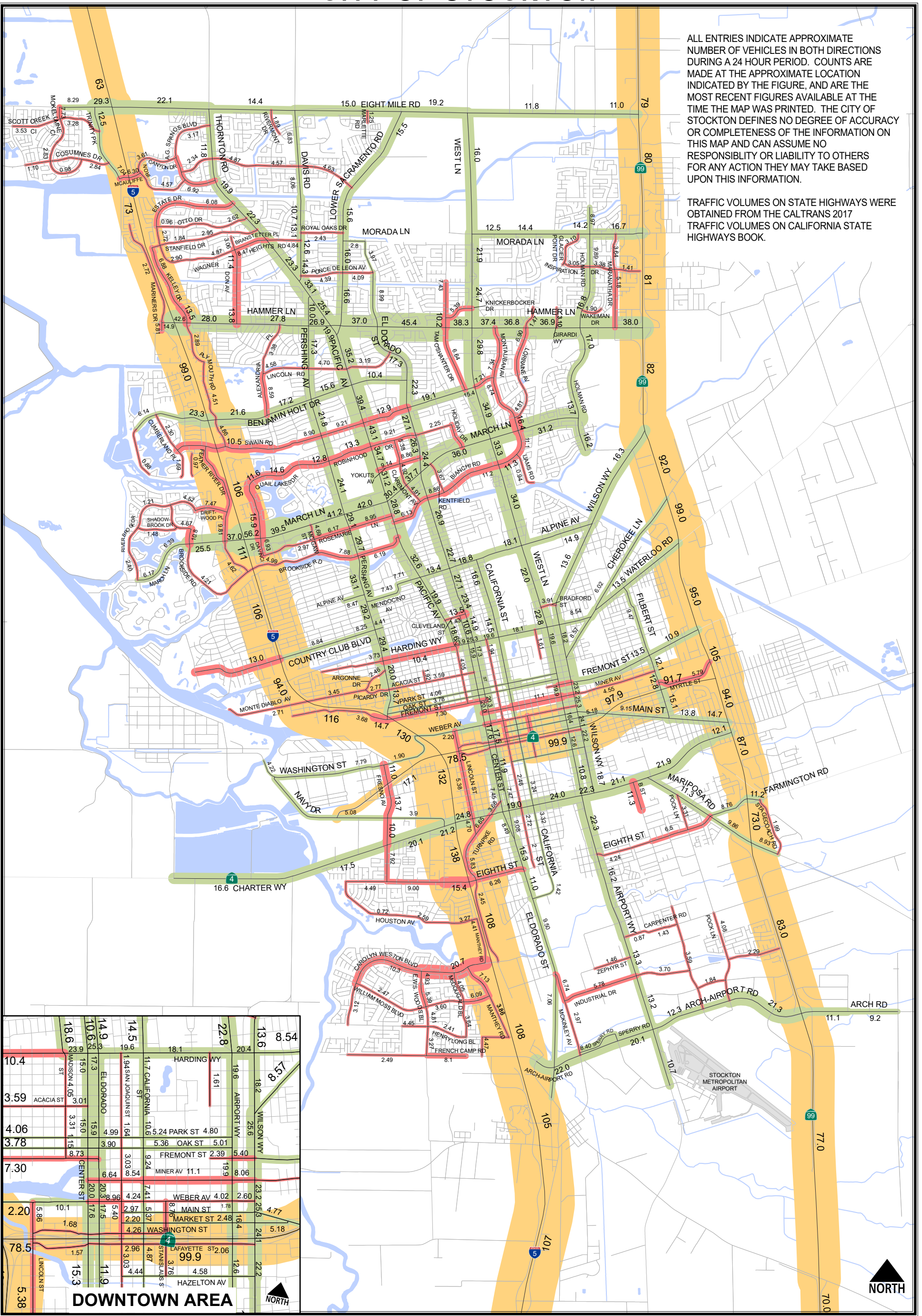
November 2015

2019 TRAFFIC VOLUME FLOW MAP

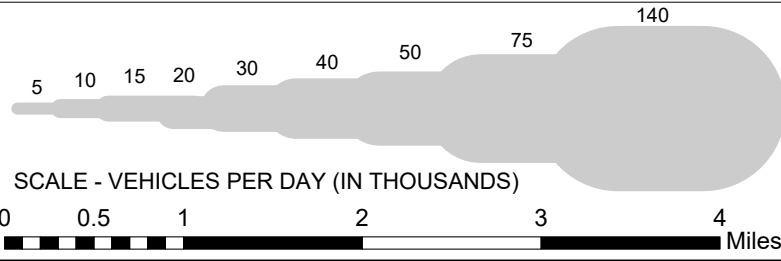
CITY OF STOCKTON

ALL ENTRIES INDICATE APPROXIMATE NUMBER OF VEHICLES IN BOTH DIRECTIONS DURING A 24 HOUR PERIOD. COUNTS ARE MADE AT THE APPROXIMATE LOCATION INDICATED BY THE FIGURE, AND ARE THE MOST RECENT FIGURES AVAILABLE AT THE TIME THE MAP WAS PRINTED. THE CITY OF STOCKTON DEFINES NO DEGREE OF ACCURACY OR COMPLETENESS OF THE INFORMATION ON THIS MAP AND CAN ASSUME NO RESPONSIBILITY OR LIABILITY TO OTHERS FOR ANY ACTION THEY MAY TAKE BASED UPON THIS INFORMATION.

TRAFFIC VOLUMES ON STATE HIGHWAYS WERE OBTAINED FROM THE CALTRANS 2017 TRAFFIC VOLUMES ON CALIFORNIA STATE HIGHWAYS BOOK.



- Water
- Freeway
- Arterial
- Collector
- Counted Street



CITY OF STOCKTON
 DEPARTMENT OF PUBLIC WORKS
 CITY HALL
 STOCKTON, CA 95202-1997